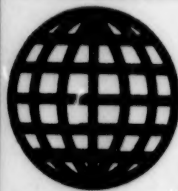


JPRS-TND-94-011
16 May 1994



**FOREIGN
BROADCAST
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SERVICE**

JPRS Report

Proliferation Issues

PROLIFERATION ISSUES

JPRS-TND-94-011

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16 May 1994

[This report contains foreign media information on issues related to worldwide proliferation and transfer activities in nuclear, chemical, and biological weapons, including delivery systems and the transfer of weapons-relevant technologies.]

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Li Peng Says Government To Aim For 'Complete Nuclear Test Ban'

OW2704152694 Beijing XINHUA in English
1517 GMT 27 Apr 94

[Text] Alma-ata [Almaty], April 27 (XINHUA)—Chinese Premier Li Peng, addressing a press conference here this afternoon, stated that a complete nuclear test ban should be established through negotiations.

Asked about China's attitude towards such a policy, Li said that while China is a nuclear country, its nuclear weapons take up only a very small portion of the world's total.

"China has initiated the proposition of not using nuclear weapons first and not resorting to threats with nuclear weapons," he noted.

He pointed out that the Chinese Government always stands for a complete prohibition and thorough destruction of nuclear weapons, and for the realization of a complete nuclear test ban in such a context.

Towards that aim, he said: "the Chinese Government holds that it is of positive significance to reach a pact on a complete nuclear test ban through negotiations."

He added that China has stated clearly that it would work towards reaching such a treaty in 1996.

"At the moment, China is positively participating in negotiations on a complete nuclear test ban of the Geneva Disarmament Conference," he said.

Foreign Ministry 'Not Aware' of Planned Nuclear Test

HK0305092794 Hong Kong AFP in English
0845 GMT 3 May 94

[Text] Beijing, May 3 (AFP)—The Chinese foreign ministry said Tuesday it was "not aware" of any upcoming nuclear test by China, as announced by the Japanese government. "China keeps the attitude of utmost restraint towards nuclear tests. The number of nuclear tests it has conducted has been quite limited," a ministry spokesman said. "I am not aware of any nuclear test in the near future."

Deputy Japanese Foreign Minister Kunihiko Saito on Monday said China would soon carry out a nuclear test, and called on Beijing to scrap the operation. A western expert in Beijing said "it would not be surprising" if there were a nuclear test in the near future, as China carries out such tests in the spring and the autumn for climatic reasons.

China's last nuclear explosion took place at the underground Lop Nor site, in the northwest of the country, on 5 October. It was the 38th test—other counts put it as the 39th—carried out in the autonomous region of Xinjiang since 1964. Foreign experts said the test, with a yield of 70

to 80 kilotonnes, was apparently part of a miniaturisation programme aimed at developing a multiple-warhead missile.

The United States has carried out around 950 nuclear tests, Russia about 600, France 200 and Britain 60.

UN Envoy Says Time Ripe for Non-First-Strike Treaty

OW2104134194 Beijing XINHUA Domestic Service
in Chinese 1124 GMT 20 Apr 94

[By reporter Gao Jianxin (7559 1696 2450)]

[Text] United Nations, April 19 (XINHUA)—Chinese Ambassador to the UN Disarmament Commission Hou Zhitong pointed out in his speech on 19 April that the time is quite ripe for China, the United States, Britain, France, and Russia to sign a treaty undertaking not to threaten the use of, or to use, nuclear arms against non-nuclear-weapon states and not to be the first to use nuclear weapons against each other under any circumstances.

Hou Zhitong said: This treaty, when reached among the five countries during their negotiations on a comprehensive nuclear test-ban treaty, will greatly reduce the risk of a nuclear war, enhance their security, and create a favorable condition for achieving comprehensive nuclear test ban and advance the nuclear disarmament process.

He said: China's proposal has received Russia's support. China hopes that the United States, Britain, and France will also respond to it in a positive way so that negotiations can begin at an early date to conclude this treaty.

Hou Zhitong also explained China's position and views "on the role of science and technology in international security, disarmament, and other relevant fields" as well as on "international arms transfer." He said: Currently, a number of countries have indicated that they would liberalize export control of relevant semi-finished materials and technologies. At the same time, there are countries considering the establishment of new export control regime. Nuclear nonproliferation should not hinder international scientific and technological cooperation, much less be used by a few countries as an excuse for blocking a large number of developing countries from obtaining and developing science and technology for peaceful purpose.

He also pointed out: China has always opposed unrestricted international arms transfers. As is known to all, the key to solving the problem of unrestricted arms transfers lay in the political will of a few countries which have the most advanced industries and most arms exports.

IAEA Nuclear Safety Evaluation Team Arrives
OW2704102294 Beijing XINHUA Domestic Service
in Chinese 1454 GMT 25 Apr 94

[By reporter Deng Ying (6772 4481)]

[Text] Beijing, 25 Apr (XINHUA)—At the invitation of the Chinese State Nuclear Safety Bureau, an International Atomic Energy Agency [IAEA] team on international evaluation of nuclear safety control today began the evaluation of the effectiveness of China's nuclear safety supervision and control.

The team consists of experts from the United States, France, Britain, Spain, and Belgium, as well as IAEA officials. During their stay in Beijing, the team members will listen to the State Nuclear Safety Bureau's briefings on nuclear safety supervision and control system, organizations and functions, the formulation of nuclear safety law and its evaluation and enforcement, as well as nuclear contingency plans in China. They will also hold special talks with the state bureau on the aforesaid topics. In addition, the team members will visit Shenzhen to hold talks with Guangdong's Dayawan Nuclear Plant and the state bureau's Guangdong Supervision Station to familiarize themselves with the Chinese state bureau's nuclear safety supervision and control over the operating units.

International evaluation of nuclear safety control is a form of international cooperation activity, through which IAEA organizes international nuclear safety experts to evaluate the effectiveness of nuclear safety supervision and control carried by the nuclear safety agency of a certain member state. The purpose of the evaluation is to obtain firsthand information about the member state's nuclear safety supervision and control, to summarize successful experiences, to make suggestions for improvement, and to exchange experiences in order to raise all member states' level in nuclear safety supervision and control.

According to a state bureau official, international evaluation of nuclear safety control is to be requested by member states on a voluntary basis and to be organized and carried out by the IAEA. Since the inauguration of the State Nuclear Safety Bureau in 1984, China has adopted relatively comprehensive nuclear safety regulations and supervision system. The international evaluation, the first to be conducted on China's nuclear safety supervision and control in 10 years, will help improve

China's nuclear safety work, enhance its influence on the world, and promote its international cooperation in nuclear safety.

The IAEA team, which arrived in Beijing 24 April, will complete the evaluation on 9 May.

Fujian Determines Site for Third Nuclear Power Plant

HK2604042894 Hong Kong TA KUNG PAO in Chinese
24 Apr 94 p 8

["Special dispatch" by staff correspondents Yang Hsiao-yang (2799 1420 3152) and Shih Ping (0670 0365): "Huian Chosen as the Site for the Fujian Nuclear Power Plant; Feasibility Studies Have Been Approved"]

[Text] Quanzhou, 23rd—Shanqian Township in Fujian's Huian County has been chosen as the site for the third nuclear power plant, after the Daya Bay Nuclear Power Plant in Guangdong and the Qinshan Nuclear Power Plant in Zhejiang. A feasibility study on the site was approved a few days ago.

The township in Huian County is the only site among the three initially picked by state nuclear power departments in Fujian that is not near an earthquake zone. Following numerous surveys and scientific demonstrations, concerned experts finally determined that Shanqian Township was the best site for a nuclear power plant in the province. The new plant will be located in the middle region of coastal Fujian at the mouth of Quanzhou Wan, near a hillside and facing the sea, and is 140 km north of Fuzhou and 20 km south of Quanzhou.

The Huian Nuclear Power Plant project plans to build six 900,000 kw generating units with a total installed capacity 5.4 million kw, commanding over 50 billion yuan in total investment. Phase one has been listed in the "Ninth Five-Year Plan" and will include two 900,000 kw generating units requiring 30 billion yuan in total investment. The units will be integrated with the eastern and central China power grids.

Huian County has begun the early phase of preparations for the nuclear power plant project in Shanqian township, which includes resettling villagers and educating people about nuclear power.

According to the electricity departments, because the project requires a huge amount of capital and the province itself is short on construction funds, the departments concerned are hoping to solve the funding problem by inviting bids and attracting foreign capital.

REGIONAL AFFAIRS

North Views Seriousness of South's Nuclear Development

SK0805061494 *Pyongyang Korean Central Broadcasting Network in Korean 1224 GMT 6 May 94*

[Commentary by Kim Ho-sam: "The South Korean Puppets' Maneuver To Develop Nuclear Weapons Has Reached a Grave Stage"]

[Text] Realizing denuclearization on the Korean peninsula today is a consistent demand of the people at home and abroad. Denuclearization in Northeast Asia cannot be realized if the Korean peninsula does not become a nuclear-free zone, and if Northeast Asia does not realize denuclearization, we cannot expect peace and security in Asia and the rest of the world.

Therefore, realizing the denuclearization of the Korean peninsula is a grave task of the times. Nevertheless, while running counter to the intention and demand of the times, the South Korean puppets today are conspiring with outside forces to all the more heatedly develop nuclear weapons.

A concrete example of this is the fact that the South Korean puppets are promoting to develop a fast-breeding reactor. A fast-breeding reactor is an atomic reactor that produces high-purity plutonium, which is raw material for producing nuclear weapons.

The South Korean puppets have promoted the development of the fast-breeding reactor for a long time. Since the 1980's the South Korean puppets had started the development of the fast-breeding reactor and it has currently reached a very grave stage. In 1984, the South Korean puppets concluded an agreement with a European country, which possesses the most advanced technology in the world in developing the fast-breeding reactor, to introduce the high-breeding reactor. It thus started to introduce its core technology, design, and experimental reactor facilities. In the late 1980's, it completed various technological preparations and experiments necessary to develop positive reactors. Also in the 1990's, after going through the experimental stage, it started to develop it on a full-scale.

According to nuclear experts, the conceptional and budgetary design of the positive reactors has already been completed in South Korea, and the overall amount that has been invested is 118.3 billion won.

Currently, the Kim Yong-sam puppet clique is receiving support and recognition from the world's social circles on developing the fast-breeder reactor, and is carrying out diplomatic activities by bustling about here and there to demonstrate a legitimate justification.

The puppets are not only all the more producing plutonium within South Korea, but they are also bringing

more of it in from other countries and are appropriately maintaining the production process itself to reprocess it.

The so-called chairman of the Foreign Affairs and Unification Committee of the South Korea National Assembly said that we cannot transfer other countries' nuclear fuel. This clearly shows how much the South Korean puppets are persistently clinging to nuclear development.

Regardless of all the facts, in an interview with THE LOS ANGELES TIMES, traitor Kim Yong-sam said that they do not have any intention at all to independently develop nuclear weapons. This is a poor excuse to avoid criticism from the world community, which is leaning toward them. This shows how much he is filled with falsehood and hypocrisy.

Papers of various countries, including the United States and Great Britain, view that plutonium already stored by South Korea amounts to 10 tonnes and that it will increase to 24 tonnes in the year 2000. As such, even though the South Korean puppets are acting as the shock brigade for their nuclear development, they are trying to mislead the world as if we have some kind of a nuclear problem.

On 4 May, traitor Kim Yong-sam said that during the past one year we have continued nuclear development and that North Korean nuclear development must be restrained in whatever way. Such a remark by traitor Kim Yong-sam is aimed at completing their goal of being armed with nuclear weapons by accelerating the development of their nuclear weapons under the protection of the U.S. nuclear umbrella by making it so that the nuclear issue on the Korean peninsula cannot reach a package settlement at the DPRK-U.S. talks in whatever way.

Nevertheless, nothing will be gained regardless of how the South Korean puppets plot to harm us with the nuclear issue. The world's people who treasure justice and truth and love peace have a clear insight of the true nature of the scheme being carried out by the South Korean puppets.

The more the Kim Yong-sam ring accelerates their nuclear development by finding fault with our so-called nuclear suspicions, the more their true nature will be revealed before the world's people. The South Korean puppets must correctly know that their reckless maneuver to develop nuclear weapons will only bring about a result of digging their own graves. They must immediately stop the play of putting the calamity of a nuclear disaster on the heads of the fellow countrymen.

SKNDF White Paper on ROK Reactor Development

SK0605043894 Pyongyang Korean Central Broadcasting Network in Korean 2200 GMT 4 May 94

[White Paper on the ROK's Development of Fast-Breeding Reactor issued by the Central Committee of the South Korea National Democratic Front on 2 May]

[Text] According to the VOICE OF NATIONAL SALVATION from Seoul, the South Korea National Democratic Front [SKNDF] Central Committee issued the following white paper on 2 May exposing the South Korean puppet clique's attempt to accelerate its nuclear armament by developing fast-breeding reactors:

The White Paper on the ROK's Development of Fast-Breeding Reactors**1. The Blitz [chongyokchok] Development of Fast-Breeding Reactors**

According to the Atomic Energy Commission [AEC]'s June 1992 final decision on its plan for atomic energy research and development, the ROK is supposed to complete the development of positive reactors [silchun-gno], which is the third stage of fast-breeding reactor development, 19 years ahead of Japan, which has now started to operate prototype reactors [wonhyongno].

In order to realize this plan, the ROK is using the same blitz mosaic method of synthesizing various countries' technologies that is used to develop nuclear weapons.

The ambition of ROK rulers to develop fast-breeding reactors began in the eighties. According to a report on the proliferation of mass-killing weapons which is a secret document of the Russian bureau of foreign intelligence, the ROK authorities agreed early in 1984 with a European country that possessed the most advanced technology in developing fast-breeding reactors, to introduce its fast-breeding reactors and thus began to introduce core technologies, designs, and experimental reactor facilities [silhomno solbidul]. The Institute of Atomic Energy Research thus secretly developed an experimental reactor, whose diameter was 1 meter, at the end of the eighties, and has used it in the various technological experiments required in the development of prototype and positive reactors.

In the nineties, the Chongwadae [presidential offices] ruling group began to develop the prototype reactor in cooperation with Japan. On 25 May 1990, the government authorities and Japan signed an agreement on cooperation in the atomic energy field, and agreed to promote technological exchanges and joint research on atomic energy. In an ROK-Japan conference on atomic energy held on 9 November 1990, they conspired [moui] to jointly promote the development of next-generation reactors.

In an exclusive secret meeting between Kim Yong-sam and Hosokawa in Kyongju on 6 November 1993, they even secretly signed an agreement on ROK-Japan joint

promotion to develop nuclear weapons in return for calling off Japan's repayment for its past crimes.

When they began to suddenly [chongyokchoguro] introduce technology and experience for the development of prototype reactors from Japan, the government authorities decided to invest about 2 trillion won in atomic energy research and development, such as the development of a fast-breeding reactor. They began to push ahead with the development of a prototype reactor in 1992, mobilizing all experts concerned with [words indistinct].

Regarding this, NIHON KEIZAI SHIMBUN dated 29 July 1992 reported: the ROK has already started to develop fast-breeding reactors, hastening its mid- and long-term plans.

According to the ROK experts on nuclear development, the design of a prototype fast-breeding reactor was turned over to Korea Heavy Industries by the Institute of Atomic Energy Research, and they have not only started to produce facilities of the prototype reactor but also completed a basic study on positive reactors, drafted a conceptional design, and set aside budgeting for it, with an investment of 118.3 billion won.

Today, the Kim Yong-sam puppet clique is busy seeking justification from the international community regarding the lawfulness of the fast-breeding reactor development.

In October 1993, the Kim Yong-sam group held an international symposium on next-generation reactors in Seoul and even had some quarters of the International Atomic Energy Agency [IAEA] promise to cooperate in the ROK plan to develop next-generation reactors.

At that time, in a public notice issued in a news conference in Seoul, Greenpeace exposed and denounced that, far from discussing scientific and technological problems, this symposium was a meeting to encourage construction for producing plutonium in the ROK, as well as an insidious meeting that would bring the danger of nuclear war closer to East Asia.

2. The Utterior Motive Behind the Development of the Fast-Breeding Reactor

Throughout the world, the fast-breeding reactor is acknowledged as lacking economic advantages and safety. For this reason, the countries developing it either suspended its operation or closed it down—the United States in 1977, France seven years after its initiation of operations, and Britain in 1994. Germany gave up operating a test reactor which it had built.

(Frank Hanabby), a British nuclear physicist, who visited Japan recently, likened the Monju, the Japanese reactor for producing high-purity plutonium which was put into operation sometime ago, to a nuclear explosion waiting to happen. Meanwhile, South Korea and Japan

are desperately engaged in the development of a fast-breeding reactor. This is directly connected with their ambition to develop nuclear weapons. We are making this statement based on the following grounds: First, if the South Korean authorities develop the fast-breeding reactor, they can multiply and produce a large quantity of plutonium for the production of nuclear bombs. The December 1991 issue of MAL magazine stated that since the fast-breeding reactor is a device justifying the massive stockpile and production of plutonium, which is the raw material for nuclear weapons, the country operating it should have little difficulty in producing nuclear weapons. The South Korean ruling group is attempting to secure a large quantity of plutonium through the development of the fast-breeding reactor.

Second, the development of the fast-breeding reactor provides a pretext justifying the purchase of plutonium from a foreign country. Because the fast-breeding reactor is a reactor which feeds on plutonium, if the fast-breeding reactor is developed, South Korea can massively and legitimately import plutonium and the dioxide of highly-enriched uranium, which the authorities have secretly been importing from Britain. (Kim Chi-o), atomic energy policy officer of the Ministry of Science and Technology, has stated that plutonium, the raw nuclear material that is to be used in the fast-breeding reactor, will be imported from a foreign country.

Third, the fast-breeding reactor must be equipped with reprocessing facilities. WOLGAN CHOSON, April 1990 issue, noted that the introduction of the fast-breeding reactor is a prerequisite to the construction of a reprocessing plant, adding that since the introduction of the fast-breeding reactor is almost certain, the construction of a reprocessing plant is a question of time.

Chong Chae-mun, chairman of the National Assembly Foreign and Unification Affairs Committee, openly calling for a review of the North-South agreements of 1991, asserting, "We cannot continue depending on another country for nuclear fuel." This clearly illustrates how frenziedly the Kim Yong-sam ring is attempting to provide reprocessing facilities with the development of the fast-breeding reactor.

Fourth, the development of the fast-breeding reactor is in itself a process to develop a nuclear bomb. Technologically, the theory of designing the fast-breeding reactor and that of designing the nuclear bomb are the same. Therefore, the technology for the development of the fast-breeding reactor means in many respects the transfer of the technology for the development of a nuclear bomb. Furthermore, nuclear physicists say that the high-purity plutonium obtained from the fast-breeding reactor can be used for the production of a nuclear bomb with the appropriate critical mass [imgye chillyang].

The stern reality clearly proves that the traitorous ruling group in the South scrapped the joint declaration on

denuclearization on the Korean peninsula agreed upon between the North and the South and that it is persistently engaged in the development of nuclear weapons. Their attempt to extract plutonium by developing the fast-breeding reactor, the monster called a time-bomb, which is prone to horrible accidents, and to make criminal nuclear weapons that will destroy the entire nation, is an unpardonable antinational crime.

The persons in authority should not only abolish the heavy water reactor and the multi-purpose research reactor but suspend the development of the fast-breeding reactor immediately. The international reactionary forces, including Japan, should stop acts of conspiring with the Kim Yong-sam ring in its development of the fast-breeding reactor directly connected with the development of nuclear bombs.

Our SKNDF and patriotic masses will certainly check and frustrate the Kim Yong-sam ring's development of the fast-breeding reactor for nuclear armament and its maneuvers to secure a large quantity of plutonium. We express the hope that the world's fair opinion will wage vigorous activities to trace to the end and stop the South Korean rulers' maneuvers to develop the fast-breeding reactor and nuclear weapons.

ROK Papers React to Kim Il-song's Interview SK2104144594

[Editorial Report] The following is a compilation of editorials and articles published in Seoul vernacular dailies on 21 April on the reportedly pacifying gesture by North Korean President Kim Il-song during his recent interview with William Taylor, vice president of the Center for Strategic and International Studies, CSIS, and other Western media, such as CNN, THE WASHINGTON TIMES, and Japanese NHK Television.

The conservative CHOSON ILBO carries on page 3 an 800-word editorial entitled "From the Sea of Fire to Fishing." The editorial begins: "Until recently, U.S. media was uproarious in reporting that a war would break out on the Korean peninsula at any time. Now, a person called vice president of the U.S. CSIS, who interviewed Kim Il-song, states that he can confirm Kim's pacifying attitude. Noting this rapidly fluctuating scene, we are led to believe that Kim Il-song's game with the South, the United States, and the media is working. Uproarious commotions occurred in Western media concerning 'war clouds on the Korean peninsula' in reaction to 'the sea of fire' remark. Several days later, when Kim Il-song said: 'I wish to visit the United States to fish and hunt,' a U.S. figure said there is no war danger. Kim is certainly toying with our side. As revealed in Kim Il-song's meeting with Western figures, he is informed on the nuclear issue, he is resolved not to ultimately abandon the nuclear program while continuing to deny possessing nuclear weapons, and he will keep trying to win a package solution using the nuclear card." The editorial concludes: "We should solidify our

security posture and maintain a firm ROK-U.S. cooperative alliance, rather than readily reacting to the North's game, which does not display any honesty. We should not hastily be tempted to meetings or talks with the North."

The conservative CHOSON ILBO carries on page 5 a 1,300-word article by reporter An Hui-chang entitled: "Kim Il-song's Pacifying Scheme—Well-Planned Propaganda Offensive Aimed at Deranging the South." The article notes that "The 'smile operation' shows that North Korean President Kim Il-song himself is undertaking must have been well-planned." The article then notes: "For the show, North Korea displayed a 'dovish gesture' to the world through an actor called Kim Il-song. The show is also aimed at deranging the South. North Korea had to stage a show like this because it is thoroughly isolated from the world opinion owing to its incomplete compliance with the ad hoc inspection by the International Atomic Energy Agency, IAEA. Furthermore, the recently reported issue of North Korean loggers and escapees from the North brought to light the North Korean human rights issue, a disgrace to North Korea." The article concludes: "The true North Korean intent behind the pacifying show by Kim Il-song will be revealed in the near future."

CHOSON ILBO carries on page 5 a 1,000-word article by Kim Chol entitled: "The ROK and the United States Taken by Surprise." The article notes that "Using a Western broadcast covering the news connected with the tension on the Korean peninsula and his 82d birthday, North Korean President Kim Il-song took the United States and the ROK by surprise. Kim tried to replace his image of a hooligan with an image of a neighborly grandfather, a good citizen one can meet anywhere, and a friendly figure for the American people." The article notes that Kim Il-song's pacifying gesture is likely to confuse ROK's North Korean policy and inspire the reunification advocates who are not aware of the true nature of the North Korean rulers. The article then notes North Korea has succeeded in enhancing its position, as was expected, in using the nuclear card in view of the present stage of development. The article notes: "Kim Il-song's nuclear strategy consists of two stages. One is to improve relations with the United States by using the nuclear issue as a weapon for the North Korean system, which is left as a solitary island in the post-cold war era." The article continues: "The second stage of Kim Il-song's strategy is to force the U.S. Forces out of the ROK, ultimately through the improvement of relations with the United States."

The moderate TONG-A ILBO carries on page 3 an article by Pak Che-kyun entitled: "Kim Il-song's Remarks on His Readiness To Abolish the Radiochemical Laboratory." The article notes Kim Il-song's remarks in a written interview with Western media that he is prepared to abolish the radiochemical laboratory, provided that the United States assists North Korea to install light-water reactors. The article notes the complexity involved in assisting North Korea to install

light-water reactors because it would mean the United States has to spend \$1 to 2 billion per reactor, not to mention the 10 years required for the construction of the reactor. The article notes: "U.S. assistance to North Korea for the light-water reactor means the improvement of relations between the United States and North Korea, which will probably lead to the establishment of diplomatic relations between the two countries." The editorial concludes: "It is not likely that the ROK and the United States will accede to President Kim's proposal at this stage, which President Kim will no doubt be aware of. Therefore, while unwilling at heart to abolish the radiochemical laboratory, he is urging the United States to improve its relations with North Korea, using the light-water reactor card, stressing that North Korea has no intention of developing nuclear weapons, according to an analysis of relevant government officials."

The moderate KYONGHYANG SINMUN carries on page 3 a 900-word article by Kim Pong-son entitled: "The Government's View on Kim Il-song's Remark Hinting of Abolishing the Radiochemical Laboratory."

Reporting that the ROK Government reaction was mixed on his remark, the article notes those who have an upbeat view hold that "such a remark is an indirect expression of change in its previous stance that 'North Korean-U.S. talks are an prerequisite for additional inspections,'" whereas those with a negative view maintain "his remark clearly shows that North Korea intends to earn more time by adding conditions regarding light-water reactors."

The moderate CHUNGANG ILBO carries on page 3 a 700-word article by Kim Yong-ha. Noting the huge differences in their capacity to extract plutonium from light-water reactors and graphite reactors, the article notes "if North Korea's intention to install light-water reactors is true, it can be interpreted as an intention to suspend its nuclear development."

The article concludes: "The clearest sign that can be seen from President Kim Il-song's remark is that 'North Korea's nuclear card' is becoming ineffective. Hence North Korea's gesture implies that North Korea, being driven into a corner, seeks an exit that serves its interests."

The moderate HANGUK ILBO carries on page 5 an 800-word article by Washington-based correspondent Yi Sang-sok entitled: "Kim Il-song's Pacifying Remarks."

Enumerating on North Korea leadership's moderate tone, the article writes: "With this pacifying attitude, North Korea aims to earn the time necessary for nuclear development, to disintegrate the ROK-U.S. cooperative system, and to deepen the confrontation between ROK hardliners and moderates." The article continues that Kim Il-song "in effect asked the world to take him at his word that he had no nuclear ambitions, giving no hint of welcoming IAEA inspections."

Noting that the North Korean nuclear issue is back to the point it had started, the article analyzes "in view of this, there is a dominant feeling around U.S. political circles that the United States should not be entangled in President Kim Il-sung's pacifying attitude and that it should firmly push ahead with its previous scenario of imposing pressure if North Korea fails to meet the early-May deadline."

The pro-government SEOUL SINMUN carries on page 3 an 800-word editorial entitled: "We Should Not Get Dazzled by a Peace Offensive."

Referring to U.S. and Japanese media welcoming Kim Il-sung's remarks for its moderate tone, the editorial questions: "How can we believe that he is telling the truth? What we need now is his remark that North Korea will unconditionally accept overall inspections and carrying it into practice. To one's great regret, he has not uttered a word on this even though he has made countless flowery remarks."

Denouncing North Korea's invariable communist-type disguised tactics, the editorial holds that "regardless of such a peace offensive, the deployment of Patriot missiles and the Team Spirit exercise should not be suspended. The UN Security Council should adopt sanctions against North Korea unless it accepts IAEA inspections. What is more, we should show more positive interest in the human rights condition in North Korea to make North Korea acknowledge the necessity of accepting nuclear inspections and holding inter-Korean talks."

Recalling the recent student demonstrations opposing the deployment of Patriots, the editorial warns that "the people and public sentiment should not be deceived by North Korea's peace offensive." The article concludes that "in this perspective, the members of the National Federation of General Student Councils should remember that they are playing into North Korea's hands."

DPRK Denounces ROK's Development of Fast-Breeder Reactor

SK0505153294 *Pyongyang KCNA in English*
1520 GMT 5 May 94

["Hanminjon on Development of Fast Breeder Reactor in S. Korea"—KCNA headline]

[Text] *Pyongyang, May 5 (KCNA)*—The Central Committee of the South Korean National Democratic Front (Hanminjon) published a white paper on 2 May denouncing the South Korean puppet clique for stepping up nuclear armament through the development of the fast breeder reactor, according to the Seoul-based radio Voice of National Salvation.

The South Korean rulers' design to develop the fast breeder reactor began in the '80s and they started the

development of a prototype reactor in cooperation with Japan at the beginning of the '90s, the white paper said, and continued:

The "government" authorities signed an agreement on cooperation in the field of atomic energy with Japan on 25 May 1990, and agreed with it to "promote the exchange and joint study of atomic technologies." It discussed with Japan "the joint promotion of the development of technologies of the next-generation atomic reactor" at the "South Korea-Japan consultative meeting on atomic energy" held on 9 November 1990.

At the tete-a-tete between Kim Yong-sam and Morihiro Hosokawa in Kyongju on November 6, 1993, they agreed in secrecy to proceed with the joint development of nuclear weapons on condition that South Korea makes a clean sheet of Japan's past crimes.

The "government" authorities decided to invest about 2,000 billion won in the researches and development of atomic energy including the development of the fast breeder reactor and began developing a prototype reactor in 1992.

The Kim Yong-sam puppet clique are now running about to get the international community to recognize the "legality" of the development of the fast breeder reactor. They hosted an "international symposium on the reactors of next generation" in October 1993, in Seoul at which they wrested a promise from some officials of the International Atomic Energy Agency to "cooperate in the development of the next-generation reactor in South Korea."

Noting that the development of the fast breeder reactor accelerated by South Korea with desperate efforts together with Japan, though its economic advantage and stability are not guaranteed in the world, is motivated by their design of nuclear arms development, the white paper explained the following reasons:

Firstly, the development of the fast breeder reactor makes it possible to breed large quantities of plutonium necessary for nuclear bombs.

Secondly, it offers a ground for justifying the purchase of plutonium from other countries.

Thirdly, the fast-breeder reactor must be accompanied by reprocessing facilities. This fully explains why the Kim Yong-sam group is trying so desperately to possess reprocessing facilities through the development of the fast breeder reactor.

Fourthly, the development of the fast-breeder reactor itself is a process of nuclear bomb development. The designing of the fast-breeder reactor is identical with that of nuclear bombs from the technical point of view.

This stark fact clearly proves that it is none other than the South Korean ruling group of traitors that reduced to a piece of waste paper long ago the joint declaration on denuclearization agreed on between the North and the

South and have been hell bent on nuclear arms development on the Korean peninsula.

The white paper demanded that the South Korean authorities eliminate the pressurized heavy water reactor and the multi-purpose research reactor and, at the same time, promptly stop the development of the fast-breeder reactor and that the international reactionary forces including Japan discontinue working hand in glove with the Kim Yong-sam group in the development of the fast breeder reactor directly linked to the production of nuclear bombs.

It expressed the hope that the unbiased opinion of the world will persistently keep tabs on the development of the fast-breeder reactor and nuclear weapons by the South Korean rulers and invigorate the activities for checking it.

AUSTRALIA

Australia Ratifies Chemical Weapons Convention

LD0905090094 Melbourne Radio Australia in English
0800 GMT 9 May 94

[Text] Australia has become the sixth country to ratify the Chemical Weapons Convention in a document lodged at the United Nations headquarters in New York. Since the convention was opened in January last year, 157 countries have signed. The convention banning chemical weapons will come into force after it is ratified by 65 countries. Australia's Foreign Minister Gareth Evans said Australia's ratification ensured it would continue to play a leading role in efforts to get a global ban on chemical weapons. Senator Evans said it was vital that other countries that had signed the treaty more quickly to meet the requirements for ratification. [sentence as heard]

JAPAN

Envoy Stresses Tokyo Not To Go Nuclear

SK2804064194 Seoul YONHAP in English
0621 GMT 28 Apr 94

[Text] Seoul, April 28 (YONHAP)—Japan's envoy asserted Thursday that his country would not go nuclear even if North Korea possessed atomic weapons.

"This (North Korean) nuclear issue has become a top priority issue and a symbolic issue for Japanese-Korean cooperation in the international society," Japanese Ambassador to Seoul Toshio Goto said at a luncheon hosted by the Korean Council on Foreign Relations.

"I would like to assure you, new Prime Minister Hata stands firm on this issue," he said.

Asked about the possibility of expanding bilateral military cooperation through such means as conducting joint

drills, the ambassador said it could happen but first required careful consideration.

South Korea's defense minister visited Japan recently and agreed on exchange calls by naval vessels, an important symbolic gesture for two countries whose history is stained by more than three decades of colonial rule that culminated with the end of World War II.

"...It's a matter requiring delicate consideration from the standpoint of the sentiments of the Korean people," said Goto, referring to the colonial years.

He voiced hope that a time will come when people on both sides can cooperate "without prejudice."

Certain media reports were raising "unfounded suspicions" that Japan might change its non-nuclear policies should North Korea develop nuclear weapons, the envoy pointed out.

"There is no such possibility that Japan would decide to go nuclear... I would like to stress here that nuclearization would run counter to Japan's national interest," said Goto.

The ambassador highlighted regional stability and three key tasks involved—encouraging coordination to settle regional conflicts, cooperating in promoting region-wide political and security dialogue, and enhancing the Asia-Pacific Economic Cooperation (APEC) forum as the region's economic engine.

On bilateral terms, he agreed with South Korean President Kim Yong-sam's view that an accurate recognition of history is the only way to point their ties in a future-and world-oriented direction.

"I fully share the view that the Japan-Korea relationship is moving beyond the bilateral framework and has reached the phase of promoting cooperation in the Asia-Pacific region and, moreover, in the international community," he said.

Nuclear Fuel Cycle Eyed That Does Not Separate Plutonium

OW0705043994 Tokyo KYODO in English
0427 GMT 7 May 94

[Text] Tokyo, May 7 KYODO—Japan will aim to establish a new nuclear fuel system that burns off part of spent nuclear fuel, plutonium and uranium together without separating the toxic chemicals, government sources said Saturday [7 May].

The Atomic Energy Commission, the country's top atomic energy policy board led by Science and Technology Agency chief Mikio Omi, has made the decision, taking into consideration outcries both at home and abroad over Japan's policy to reproduce pure plutonium that can be used for nuclear weapons, the sources said.

Under the new nuclear fuel cycle, curium and neptunium, which have a long half-life and thus are difficult to

dispose of, will be extracted from radioactive waste contained in spent nuclear fuel along with plutonium and uranium to be used as new fuel, they said.

The current system separates spent nuclear fuel into plutonium, uranium and radioactive waste.

The reprocessing of spent nuclear fuel was initially developed as military technology to make atomic bombs and there are recent concerns over use of plutonium for making nuclear weapons.

North Korea, suspected of developing a nuclear arsenal, is allegedly using the technology.

The new system, however, will not reproduce pure plutonium that can be used for nuclear bombs, thus reducing concern over nuclear proliferation, the sources said.

The commission hopes to develop the technology by 2030, the target year for use of plutonium-fueled fast-breeder reactors, after constructing an experimental reactor and a reprocessing factory for the new system, the sources said.

On 5 April, Japan's new plutonium-fueled fast-breeder reactor "Monju" reached criticality, the point at which the reaction in fissionable material is sufficient to sustain a chain reaction.

Japan has made fast-breeder reactors a cornerstone of its nuclear power policy. Such reactors produce more fissionable material than they consume.

At present, some 30% of Japan's electricity is generated by 42 nuclear reactors throughout the country.

NORTH KOREA

Pyongyang Reportedly Developing Taepodong Missile
SK2404042094 Seoul HANGUK ILBO in Korean
24 Apr 94 p 1

[Report by correspondent Yi Chang-min from Tokyo]

[Text] Quoting the U.S. military and aviation journal, AIR SPACE DAILY, in a report dispatched from Washington, Japan's SANKEI SHIMBUN reported on 23 April that soon after developing the Nodong No. 1 missile, North Korea is developing a new missile which has a shooting range of up to 6,000 km.

According to SANKEI SHIMBUN, there are two types of the new missile. This was discovered in February at the North Korean Sannudong Research Development Institute through the U.S. reconnaissance satellite. Each type consists of two-stage rockets [kakkak idanisikuro toeoitta].

The U.S. intelligence authorities stated that the new missile was named, Taepodong-1 and Taepodong-2. They estimate that the first stage is 18 m long and its diameter is 2.4 m and the second stage is 14 m long and its diameter is 1.3 m.

SANKEI SHIMBUN reported: "If the shooting range is 6,000 km, Guam as well as all of Japan, including Okinawa, can be a target. AIR SPACE DAILY reported that if North Korea is successful in developing this missile, it will emerge as a big military power in the East Asian region."

SANKEI SHIMBUN also reported: "Great Britain's military journal, JANE'S DEFENSE WEEKLY, reported that the missile North Korea is developing has a shooting range of over 2,000 km. However, this is the first time it is revealed that its shooting range is in fact 6,000 km. If North Korea completes the development of this missile, the entire East Asian region would be greatly threatened."

ARGENTINA

Nuclear Agency Director Promotes Services, Exports

PY3004003194 Madrid EFE in Spanish
1343 GMT 27 Apr 94

[Text] Buenos Aires, 27 Apr (EFE)—Manuel Mondino, president of the National Commission for Atomic Energy (CNEA), has said that Argentina wants to consolidate its position as a nuclear technology exporting country, adding that the agency exported for a total of \$300 million between 1977 and 1993.

Mondino told EFE: "Over the past two decades the country has won a place in the competitive international market, thanks to the quality of its exports and the degree of technology transfer."

The CNEA is a state organization, associated with private capital to design and develop projects and conduct research in the areas of nuclear power plants, fuel cycles, radioisotopes, radiation, and technology services.

Argentina has signed several agreements for the peaceful use of nuclear energy, and is a member of various safeguard agreements. Nuclear agency representatives exhibited the results of their latest research efforts during a recent American continent experts' meeting in southern Argentina.

"On that occasion we explained that the CNEA provided 16 percent of the electricity consumed by the country through its two nuclear plants, which places us in first place as an energy producer," Mondino said.

The CNEA president said that on the occasion there were also lectures on the application of radioisotopes, which is a vital product for the early diagnosis of several diseases, in nuclear medicine.

In the area of exports, the most important deals were the export of reactors to Peru, Algeria, and Egypt, the sale of uranium dioxide to Germany, and a plant for the production of radio-medicines to Cuba. The CNEA also closed deals with Canada, Iran, Rumania, and Turkey.

Argentina produces 8 percent of the total world Cobalt 60 production. Cobalt 60 is used in nuclear medicine, the preservation of food, the elimination of pests that attack crops and livestock, and to improve industrial yields. The radioactive material is produced in the Embalse Nuclear Plant, and the surplus is exported to the United States, France, Chile, Colombia, Mexico, and Belgium, Manuel Mondino said.

Regarding Argentina's development of nuclear projects for peaceful use, as compared with the rest of Latin America, Mondino said that his country and Brazil "have the most advanced projects, closely followed by Mexico."

Mondino expressed enthusiasm for the plant to irradiate waste that is being developed by CNEA scientists,

stressing that Chile has shown interest in the project because it is redesigning its own sewage disposal network.

The CNEA has 5,682 agents throughout the country. Among its most important installations are two operating nuclear plants, one nuclear plant in an advanced state of construction, three atomic centers, one reactor for the production of radioisotopes, and one plant for food irradiation.

The agency also has a cell for the production of sealed cobalt 60 sources, two heavy water plants—one experimental and one industrial—one uranium enrichment plant, one Nuclear Medicine School, and one Physics and Nuclear Energy Institute, which is considered one of the most important in Latin America.

Atucha-2 Nuclear Power Plant Construction Delay Examined

PY0605212194 Buenos Aires LA PRENSA in Spanish
6 May 94 Section 1 p 6

[Text] National Commission for Atomic Energy (CNEA) sources have estimated that the Atucha-2 nuclear power plant, which has been under construction since 1982, will become fully operational in 1997, and not next year, as CNEA Chairman Manuel Mondino announced recently in a news conference.

The Atucha 2 reactor was forged in Japan and welded in Germany. The 1,000 metric ton reactor was manufactured of fine steel and a manganese-molybdenum-nickel alloy. The 14 meter high reactor has been stored for seven years in a warehouse 200 meters from the area where it will be finally installed.

During German Research and Technology Minister Paul Krueger's visit to Atucha-2 on 4 May, many spiderwebs on the reactor's support base were noticed. A heart crossed by an arrow, drawn with chalk on the reactor's metallic structure, was also noticed. The CNEA sources admitted that "no date has been set for the installation" of the reactor. CNEA sources involved in the project's management emphasized that the engine room and the engineering work have nearly been completed, but admitted that the assembly stage is stuck. Atucha-2's estimated cost totals about \$3 billion.

The sources said that the project, which is under construction a few meters from the Atucha-1 nuclear power plant near the Parana de las Palmas River in Buenos Aires Province, has been delayed "considerably." The sources estimated this delay at "four to five years." In the sources' opinion, Atucha-2's construction problems arose from the Malvinas war, when the international loans that had been agreed for its financing were discontinued, and later from budget constraints and the hyperinflation of 1989.

The sources said that Atucha-2 "was a result of the maximum use of Atucha-1." The sources explained that the new reactor "is 20 percent larger" than Atucha-1, but will produce "more than double the energy of Atucha-1." While Atucha-1 has an output of 350 megawatts, using natural uranium and heavy water with 233 fuel elements, Atucha-2 will use the same system but will produce 745 megawatts with 451 fuel elements.

BRAZIL

Admiral Terms Sale of Enriched Uranium 'Good Deal'

PY2604020594 Rio de Janeiro O GLOBO in Portuguese
25 Apr 94 p 4

[Text] Brasilia—Admiral Mario Cesar Flores, head of the Strategic Affairs Secretariat [SAE], yesterday characterized as "foolishly absurd" allegations that the sale of Brazilian enriched uranium to the U.S. company Nuexco would endanger the reloading of the Angra-1 nuclear plant. In its latest edition, the magazine ISTOE reports that Nuclear Industries of Brazil (INB) has sold the enriched uranium at a cost of \$1.7 million.

Flores said: The transaction will not bring any problems to the Brazilian nuclear program. He added that he would release today all the figures concerning Brazilian uranium reserves.

Flores said he learned about the transaction after the contract had been signed, as INB is empowered to make these sales on its own. He said this was a good deal for INB, as the money it has obtained through this sale will make it possible to reactivate already this year the uranium mine of Pocos de Caldas, in Minas Gerais State.

Regarding the possibility that the Brazilian uranium could be diverted to countries like Iraq, Iran, or India—to make bombs—Flores was even more emphatic.

He said: It would be paranoid to believe that Canada, one of the most active verifiers of the use of nuclear energy, could divert the material. Canada, Flores said, is the ultimate destination of the Brazilian uranium sold to Nuexco.

'Controversial Operation' in Atomic Market Viewed

PY0205140394 Sao Paulo ISTOE in Portuguese
27 Apr 94 p 16

[Text] In a controversial operation, which is suspicious in some experts' opinion, Brazil is participating in the explosive international atomic market. On 20 April, ISTOE learned about a deal (renting yellow cake [two preceding words in English] and enriched uranium to the U.S. enterprise Nuexco) that left the Brazilian strategic reserves at zero. Some suspect that Brazil may be indirectly feeding an Iraqi or Iranian atomic bomb. Others warn about the risk Brazil is running of being the victim

of a "nuclear swindle [calote nuclear]." Brazilian Nuclear Industries (INB) President Roberto Franca celebrated the transaction as the first step toward the financial independence of the state-owned uranium-producing company: "I made an open commercial transaction through bidding." For \$1.7 million, the INB rented out the fuel for periods ranging from six to 18 months. The fuel will begin being returned in August. Nuexco sent the Brazilian fuel to Canada. Professor Bernardino Ponte, who was an International Atomic Energy Agency surveyor for 12 years, found the news strange. He said: "Canada does not use uranium oxide produced by Brazil, which has a low concentration." To those who want to solve the mystery, professor Ponte suggests they read the book YELLOW CAKE [two preceding words in English] by journalist Alexandre Baumgarten, who was murdered in 1982. In the book, the journalist discusses the trafficking in Brazilian uranium to be used in the production of atomic bombs in Iraq, Iran, and India. Strategic Affairs Secretary Admiral Mario Flores told ISTOE on 22 April: "I do not believe Canada would accept playing this sort of role. Canada is one of the most active controllers of the use of nuclear energy." Adm. Flores was asked about the issue before the business was closed. The INB president confirmed: "I believe the material was really transferred to Canada because part of the fuel that was stored in Brazil was shipped to Canada." According to Franca, what Nuexco did with the fuel is not Brazil's problem. Corvette Captain Sergio Porto da Luz, adviser to the Chamber of Deputies National Defense Committee, doubts the negotiation's strategic virtues. The problem is that the 200 metric tons that must be returned in August are crucial for the production of pills to recharge Angra-1. This operation is expected to take place in the beginning of 1995. "The U.S. company may not have fuel available at the established moment and decided to pay us for it in cash," Porto da Luz fears. Franca answers: "Nuexco has given us all guarantees, particularly because it has its own mines." The funds from the transaction have been used to reactivate the Pocos de Caldas mine. By July, the pills stock will have been reduced to 80 metric tons, which is less than half the pills necessary to recharge Angra-1.

Advanced Uranium Enrichment Process Sought

PY2104154094 Sao Paulo GAZETA MERCANTIL
in Portuguese 19 Apr 94 p 14

[Article by Virginia Silveira]

[Text] Sao Jose dos Campos—By the next decade Brazil should be joining the restricted club of countries that have mastered the most advanced technology to obtain the enriched uranium (235) that is used as fuel for nuclear reactors. The Institute of Advanced Studies (IEAv) at the Aerospace Technical Center [Centro Tecnico Aeroespacial—CTA] in Sao Jose dos Campos is already producing uranium 235 through the method of separating isotopes with laser beams via atomic vapor.

The separation of uranium isotopes is an activity that currently demands heavy investment. Colonel Hugo Pereira Chaves, director of IEAv, says that among all the methods currently known (gaseous diffusion, ultra centrifuge, molecular) for uranium enrichment, the atomic process is best from the economic point of view. This method, he adds, is also best from the ecological point of view, given that the radioactive waste may be recycled and treated.

The most widely used fuel element for nuclear reactors is uranium, whose natural composition is as follows: 99.3 percent is made up of an isotope with an atomic weight of 238, and 0.7 percent of an isotope with an atomic weight of 235. Most of the existing nuclear reactors need "enriched" uranium. This means increasing the 235 isotope content, which is radioactive, to a concentration of greater than 3 percent.

The physical principle of the atomic separation method is based on the different abilities of the 235 and 238 isotopes to absorb light from well defined frequencies, that is, light of specific colors. The atomic process works with uranium in its metallic form. The separation of 235 and 238 isotopes undergoes three stages.

The metallic uranium is placed in a container heated to 3,000 degrees [scale not specified]. The uranium vapor generated by the high temperature is absorbed by laser irradiation at a frequency that attracts the 235 atoms to a metallic plaque, from which they are extracted.

According to Col. Pereira Chaves, the IEAv has attained a level of 50 percent uranium enrichment during the process of exciting the 235 molecules. Extraction of uranium, however, has yet not been possible at such a level, he said. He did not reveal the level of enrichment already attained by the IEAv, as it is an industrial secret.

The United States

Col. Pereira Chaves reported that the United States has already managed a 30 percent enrichment in its tests—of which very little is known. The industrial development of this process is still not known in any other country of the world. The Americans have already decided that the atomic separation process with laser beams must be adopted by the United States on a commercial scale in the next century.

Atomic separation, Pereira Chaves said, will replace the current gaseous diffusion process that is underway. "Between 1972 and 1988 the United States invested \$700 million in the atomic process. An industrial scale demonstration will require an additional \$946 million," he added, according to IEAv estimates.

The IEAv, according to Pereira Chaves, has allotted only \$71 million to its uranium enrichment program with laser beams since 1981. Part of these resources, nearly \$41 million, were financed by the Aeronautics Ministry, and

the rest came from the National Nuclear Energy Commission (CNEN), the Funding Authority for Studies and Projects (Finep), and the Strategic Affairs Secretariat.

For the project to develop satisfactorily, Pereira Chaves said, the institute would need something between \$1.5 and \$2 million per year. In the past three years, however, the institute has been receiving less than \$1 million per year for the maintenance of its entire project structure, Chaves said.

Molecular Process

In addition to the atomic process, the IEAv has concentrated its research on uranium enrichment by laser beam through the molecular method. The molecular method, according to Chaves, uses uranium hexafluoride gas (UF₆) mixed with a lighter gas (carrier gas). The mixture is accelerated in a supersonic (high speed) pipe, and is then cooled to a temperature of minus 190 degrees Celsius.

"Under those conditions UF₆ molecules that have the uranium 235 isotope absorb laser radiation of a different frequency than that absorbed by the molecules of uranium 238," Chaves said.

The molecular process, according to the director, is also being studied as one of the alternatives that could be adopted by Brazil for the industrial-scale production of uranium 235. "The advantage of the molecular separation method is that there is a facility in Resende (Rio de Janeiro), which was built under an agreement signed with Germany in 1979," he said.

Another advantage is that researchers are already familiar with the entire corrosion process caused by UF₆, which they have learned to control. The metallic uranium corrosion process (used for atomic separation) is still unknown to them.

Lower Cost

Research with the atomic separation method, however, is at a more advanced stage, as it has succeeded in separating uranium 235, though at a laboratory level. Production costs, according to the IEAv, are 23 percent lower than those for traditional enrichment processes. "Until 1985, a total investment of \$9.7 million was considered necessary for the operation, maintenance, research, and development of the atomic separation method," Chaves said.

The figures, according to Chaves, are included in a study made in the United States and published by the NUCLEONICS WEEK newspaper. Based on the study, the United States invested in the expansion of its uranium enrichment capacity through the laser separation process.

In Brazil, uranium 235 is produced at an industrial scale by the ultracentrifuge method, which is based on the mass difference between isotopes. The Navy Ministry has a research center that specializes in producing uranium through this method.

REGIONAL AFFAIRS

Sri Lanka Frees Egypt-Bound Ship Carrying Phosphorus Pentasulphide

*BK2804044394 Hong Kong AFP in English
0400 GMT 28 Apr 94*

[Text] Colombo, April 28 (AFP)—Sri Lankan authorities released an Egypt-bound cargo of chemicals detained at the main port here on suspicion that it could be used to make nerve gas, officials said Thursday.

The three containers of phosphorous pentasulphide arrived here four weeks ago from the Indian port of Bombay for transshipment to a consignee in Egypt, port officials said.

The Defence Ministry ordered the containers to be released this week following investigations regarding the end use of the cargo. The chemical is used to make pesticides and is also an ingredient in the manufacture of nerve gas.

The Egyptian embassy in Colombo had informed the authorities that the cargo was intended for the legitimate use of one of its chemical plants, the Dyestuffs and Chemicals of Kafar Dawar.

Indian Article on Genesis of Pakistan Nuclear Program

*BK2904053994 Delhi THE HINDUSTAN TIMES
in English 22 Apr 94 p 13*

[By Satish Kumar]

[Text] Dr. A.Q. Khan represents the national pride of Pakistan. The story of his achievement is the story of Pakistan's nuclear bomb, the story of how faith and determination on the part of a nation can convert a dream into a reality.

Dr. Khan was not an ordinary person, but his own country took time in recognising his talent. A highly qualified engineer in physical metallurgy, and a specialist in uranium enrichment, when he applied for a job in the Pakistan Steel Mills in Karachi in 1967, he was rejected. He returned to Holland to pursue further research in his field.

After India's nuclear explosion of May 1974, Dr. Khan wrote to Zulfikar Ali Bhutto offering to return to Pakistan. Mr. Bhutto examined the background and experience of Dr. Khan and encouraged him to return. When finally, in January 1976, Dr. Khan accepted the offer and declared his intention to return, Mr. Bhutto got excited, thumped his fist on the table, and said, "I will see the Hindu bastards now."

The project was launched straightaway. An important element in its implementation was the selection of an appropriate site for establishment of the uranium enrichment plant. Dr. Khan and his colleagues inspected a

number of sites, viz. Haripur, Tarbela, Hassan Abdal, Cambelpur, Fateh-Jang, Bannu, Kohat, Sargodha and others. Finally, Kahuta, a few miles south-east of Islamabad, was chosen because of being close to the capital, located in the middle of the mountains, and somewhat isolated.

The accomplishment of uranium enrichment up to the desired level has rightly been described as the story of a miracle by Mr. Zahid Malik, a close friend of Dr. A.Q. Khan, and the author of the book "Dr. A.Q. Khan and the Islamic Bomb." The story began in August 1975 when the Pakistan Embassy at Brussels enquired about high frequency inverters from a company in Holland. These highly sensitive electronic instruments control the spinning of the centrifuge and Pakistan procured them from at least four countries.

Western authors who have been trying to chase Pakistan's nuclear weapons programme admit that tracking these Pakistani purchase was difficult detective work. The purchasers' expert handling of secret purchases and their daring and expert actions always placed them one step ahead of the foreign detective and secret agencies deployed to stop the supply of nuclear materials to Pakistan. In the business of nuclear equipment which has billion of dollars worth of black market, nobody in 1978 knew what Pakistan was up to. Regular purchases had started in 1976.

In March 1979, the CIA informed the U.S. government that Pakistan was commissioning the centrifuge plant for the production of weapon-grade uranium and that the already installed inverters were sufficient for ten thousand centrifuges enough to produce one hundred and fifty kilograms of enriched uranium per year. This was sufficient for six to seven nuclear bombs. America immediately took up this matter through its Ambassador. The economic aid that was to be given to Pakistan in April 1979 was gradually reduced and finally stopped completely.

Pakistan's dream of having a nuclear bomb goes back to the days of the 1965 war, when it felt disillusioned by America's suspension of military aid. About a year and a half to two years after the war, a request was made by Pakistan for a plutonium reprocessing plant to a French firm, SGN [expansion unknown]. Within a few weeks of becoming the President and Chief Martial Law Administrator of Pakistan, Zulfikar Ali Bhutto, on 20 January 1972 convened a meeting of selected Pakistani scientists from home and abroad at Multan. At this meeting, Mr. Bhutto stressed upon the scientists his wish for Pakistan to be a nuclear power as soon as possible.

His chief scientific advisors, Dr. Abdus Salam and Dr. I.H. Usmani declared it to be impossible because Pakistan did not have the basic infrastructure. Mr. Bhutto would not take "No" for an answer. According to Mr. Bhutto's Press Secretary Khalid Hassan, Mr. Bhutto decided to remove Dr. I.H. Usmani and appointed Mr. Munir Ahmad Khan as the new Chairman of Pakistan

Atomic Energy Commission. According to Zahid Malik, Dr. Abdul Salam and Mr. Munir Ahmad Khan further convinced Mr. Bhutto that a reprocessing plant was necessary for the Pakistani bomb. Therefore in 1972, Pakistan entered into negotiations and made a formal request to France for the procurement of a reprocessing plant. In March 1973, Pakistan entered into an agreement and signed a contract with the SGN for the preliminary design of the plant.

On 8 August 1976, U.S. Secretary of State, Henry Kissinger, came to Pakistan and offered to supply 100 A-7 Corsair jet fighters if it agreed to cancel the reprocessing plant deal. At the same time, stoppage of all military and civil aid under Symington amendment was threatened if it did not. In April 1977, Bhutto, while addressing the National Assembly, attributed the political agitation against him to "a certain power against Pakistan." Later in 1977, when Mr. Agha Shahi was in Paris to work out the modalities of executing the contract, the French Foreign Minister offered to supply a "Coproducting Plant" in place of the Reprocessing Plant."

In January 1978, President Carter again visited Paris and held discussions with Mr. Giscard d'Estaing. Prior to his departure for Paris, Mr. Carter had already granted landing rights for the French "Concorde" at Kennedy airport. The prospect of the sale of Concorde to the U.S. seemed more lucrative to France than the sale of a reprocessing plant to Pakistan. France began to yield to American pressure. On 5 June 1978, France finally decided not to execute the contract.

But Pakistan's efforts to acquire nuclear weapon capability through the uranium route continued unabated. Pakistan acquired this capability by the end of 1986 and found a way of announcing it to the world in early 1987. Zahid Malik has taken great pains to establish the point that Indian journalist Kuldip Nayar's interview with Dr. A. Q. Khan on the basis of which Nayar had written that Pakistan had already acquired the atomic bomb was "concocted." The interview which took place in Islamabad on 29 January 1987 was published by the London OBSERVER on 29 February. Mushahid Hussain who took Nayar to A.Q. Khan's house has also been castigated. One wonders, however, how a massive intrusion of this sort into a most highly guarded secret domain of Pakistan could have taken place without some official design behind it. More so, when the context was the ongoing military exercise by India called the 'Brasstacks'. In any case, General Ziaul Huq did not lag behind in announcing to the world through a series of

interviews particularly the one with the TIME magazine in March 1987, that Pakistan had acquired the nuclear capability.

Kurdish Sources Say Captured CW Components 'Came From Iran'

PM0505101794 London AL-SHARQ AL-AWSAT in Arabic 4 May 94 p5

[Adnan Husayn report: "Kurdish Sources Tell AL-SHARQ AL-AWSAT: The Chemicals Smuggled Into Iraq Came From Iran"]

[Text] London—Iraqi Kurdish sources who wished to remain anonymous have stated that the two trucks loaded with materials used in the manufacture of chemical weapons seized last month by the police of the Kurdish Government in the northern region of Iraq came from Iran.

The sources told AL-SHARQ AL-AWSAT yesterday that the Kurdish drivers of the two trucks admitted that they crossed the border from Iran and intended to drive the two trucks to areas under the control of the Iraqi Government and deliver them to an Iraqi party known to them.

Officials of the Patriotic Union of Kurdistan [PUK], led by Jalal Talabani, had stated on Saturday that on the night of 17-18 April the Kurdish police impounded the two trucks, which were carrying 19 tons of sodium phosphate, which is used in the production of chemical weapons, and mustard gas, and that "the consignment was exported from the PRC and passed through a country neighboring Iraq."

The Kurdish sources said that the two trucks were seized in the area of Darbandikhan, which is only a few kilometers from the Iraqi-Iranian border. They declined to give more details because "the interrogation of the two drivers is not over yet."

Under the second Gulf war ceasefire terms, Iraq is not allowed to produce, import, or use chemical, biological, or nuclear weapons, or long range missiles or materials used in the manufacture of such missiles.

INDIA

'Official Sources' Say No Change in Stand on NPT

BK1704160994 Delhi All India Radio Network in English 1530 GMT 17 Apr 94

[Text] Official sources in New Delhi have clarified that there is no change in India's stand on Nuclear Nonproliferation Treaty. New Delhi believes that nuclear nonproliferation must be universal, comprehensive and non-discriminatory. The sources said the prime minister had categorically stated this position in his recent address to

the Army commanders conference. They were reacting to press reports that the BJP [Bharatiya Janata Party] leader, Mr. Atal Behari Vajpayee, expressed the view that the prime minister's observations over the issue needs clarification.

The sources said Mr. Narasimha Rao in his speech made it clear that any attempt to restrict India's nuclear option will be unacceptable and unrealistic in view of Pakistan having acquired nuclear weapon capability. There is also proliferation of such weapons recently.

Results of Strobe Talbott Visit Evaluated

BK2204082894 Delhi THE PIONEER in English
13 Apr 94 p 8

[Article by political commentator Nikhil Chakravartty]

[Text] The U.S. has a whole battery of think tanks with an enormous amount of material at their disposal. And these think tanks are supposed to help in the moulding of public opinion and Government policies. And yet, when it comes to the actual application of policies, the U.S. Administration has been displaying an amazing lack of coherent thinking and mature understanding of the impact of its policies on the rest of the world. It has hardly covered itself with glory in Somalia nor has Bosnia added a feather on its cap.

In this rather messy background, the Deputy Secretary, Mr. Strobe Talbott's Indo-Pak safari last week has been a rather pedestrian exercise without an indication of any fresh thinking on South Asia. Granted that he was far more cautious and sophisticated than his impulsive under-secretary, Mr. Talbott's visit has been no path-breaking achievement. Mr. Talbott came, saw but hardly conquered.

In New Delhi, he bravely tried to assure that Washington intends "to cultivate good relations with India for the sake of that relationship and to do the same with Pakistan." In other words, New Delhi should not be concerned with what Washington would be doing with Islamabad. Consequently, it is not India's business to bother about what the U.S. would be giving or denying to Pakistan: That should be treated as a bilateral issue between two countries, just as Pakistan should treat any Indo-U.S. deal as of no consequence for itself. On paper this sounds like good logic, but in reality it is naive indeed. The strategic importance of Pakistan in the Pentagon's future projections in Central Asia and the Persian Gulf zone has hardly gone down even after the end of the Cold War. The potential turbulence that stretches from Xinjiang to Iran calls for a U.S. foothold in this region, and that is what Pakistan can provide.

During Mr. Talbott's talks, there was a feeling in New Delhi that the ingenious formula—offering of F-16s in exchange for Islamabad agreeing to cap its nuclear weapons programme—would be a nonstarter as no Government in Pakistan would agree to give up its nuclear weapons programme. However, after his Islamabad

talks—which he described as a "total success"—it is becoming clear that what the Clinton Administration is immediately concerned with is the disposal of the F-16 fleet along with other lethal items for which the one-time waiver of the Pressler Amendment is being pressed in the U.S. Congress.

The immediate compulsion of the Clinton Administration is to sell the product of the giant aircraft and missile manufacturers in the U.S. Senator Pressler has already exposed this with regard to the F-16 offer to Pakistan. And if Mr. Narasimha Rao is willing, President Clinton will readily offer to sell another consignment of aircraft to India. Let us not forget the rumpus over our cryogenic rocket deal with Russia which was bullied to go back on its contract to make room for the promotion of the American rocket products. And now the pressure is being mounted on New Delhi to abandon its missile programme. "If you need rockets or missiles, we are ready to sell our stuff, why make yours" seems to be the latest jingle in the U.S. arms bazaar.

The question arises: What about the widely advertised mission to cap Pakistan's nuclear weapons programme? In New Delhi, Mr. Talbott elaborated on the deal with Pakistan as "an equation" with "strict unambiguous conditionality"—of which one half is the release of F-16s and the other half is "agreement in advance to a veritable cap" on Pakistan's nuclear programme. Two days later at Islamabad, he threw more light. In carefully worded comments it was stated that the U.S. and Pakistan have agreed to go in for "further consideration" of the U.S. proposal. And this joint effort would be for "developing our approach" to the equation. And for all that only a "preliminary accord" has been reached. And when further consideration was completed and "an approach" was developed, then they would come to produce the goal of capping, then reducing and finally eliminating nuclear weapons. A fairly protracted process which may even outlive the Clinton Administration. But the supply of F-16s would be immediate.

In New Delhi, Mr. Talbott sought to underplay the issue of F-16s as having only "a potent symbolism" in the South Asian region and urged the need "to look beyond symbolism to reality." However, such pseudophilosophical profundities can hardly conceal reality. With protocol politeness Mr. Narasimha Rao had to gently warn Mr. Talbott that the supply of F-16s would be a matter of serious concern for our defence and this would compel the Government to go in for counter-measure jeopardising Indian economy.

The nonproliferation drive of the U.S. Administration hardly impresses the Third World. Behind the tenacious drive to disarm Iraq and current threats to North Korea, as also the pressure on India and Pakistan to abandon the nuclear option, there is a clear move to perpetuate the dominance of the nuclear powers over those countries which are denied these weapons—the very basis of the NPT [Nonproliferation Treaty].

Secondly, Washington's calculation that if Pakistan could be cajoled to agree to cap its nuclear weapons programme then it will be possible to persuade India to follow suit, is made invalid by fact that the nuclear threat to India does not come from Pakistan alone but also and more seriously from China, and now from other Central Asian countries particularly Kazakhstan which has a portion of the huge nuclear stockpile of the former Soviet Union. And why should India leave out the danger of nuclear threat from Israel which had once made a sneaking attack on Pakistan's nuclear arsenal at Kahuta? So, if one is really serious about dispelling Indian threat perception, one has to extend much beyond a two-country arrangement between India and Pakistan, or even the latest version of 5+2+2 (i.e., the five permanent members of Security Council including China, plus Japan and Germany along with India and Pakistan) that is heavily weighed against India.

Thirdly, the Indian perception is that the nuclear powers are not serious about reversing the nuclear arms race towards nuclear disarmament. Had they been genuinely serious about nuclear disarmament, then why did they not readily respond to Rajiv Gandhi's initiative when he placed before the UN special session in 1988 a detailed and realistic Action Plan—which was updated by Mr. Narasimha Rao in his intervention before the special session of UN Security Council in 1993? There has always been a condescendingly polite appreciation of the Indian initiative without any effort at any serious follow-up discussions by the big bosses of the nuclear corporate club.

Here is a foretaste of the new form of world overlordship through nuclear monopoly of a select group of powers with the U.S. at the head, and to ensure economic domination through control of world trade as GATT represents, in which discrimination is sought to be practised even through non-economic means. In this context, the arms sale is first on the priority list for the U.S. The message is clear for all VIP visitors to Washington: Don't bother to make your own weapons, that is only a fetish. Instead, buy it from us.

Defense Sources View Country's Missile Program

BK2604160094 Delhi THE HINDUSTAN TIMES
in English 20 Apr 94 pp 1, 20

[By Avinash Singh]

[Text] New Delhi, 19 April—Further trials of the indigenously-developed intermediate range missile, Agni, have been postponed indefinitely. The temporary capping of the Agni missile programme is being attributed to a financial crunch.

The Defence Research Development Organisation (DRDO) had sought Rs. [rupees] 50 crore to conduct three more test launches in the near future, but the Government has not responded to the request. The

postponement of the Agni programme is being interpreted as a concession to American concern about India's missile programme.

The Clinton Administration has demanded that India's short-range missile, Prithvi, which is ready for induction in the armed forces, should also not be deployed. Army sources, however, say that they do not have any specific instructions about Prithvi as yet.

Defence sources further claimed that India was not going to abandon its strategic missile programme under American pressure, but admitted that some delays would now be inevitable. Agni has been successfully test-launched thrice between 1989 and 1994. But at least six more tests are needed before it can be considered for deployment.

Meanwhile, India is learnt to have finalised purchase of 30 fourth generation MiG-29M fighter aircraft from Russia. These highly sophisticated, look-down-and-shoot-down planes are equipped with the Doppler radar system which function in all weather conditions.

The finalisation of the MiG-29M deal is evidently India's response to the proposed sale of 38 F-16 deep-penetration aircraft to Pakistan by the U.S. The MiG-29's will be acquired in two batches, with a score of planes joining the Indian Air Force over a three-month period starting in May.

Known for their extreme manoeuvrability and high visibility range, the fly-by-wire Tumansky R-33D turbo engine-fitted MiG-29M's are rated to be better than the F-16's in most respects, except for their armament load capacity. The Russian planes, however, cost a fraction of their American counterpart, and the price of the MiG deal is estimated at Rs. 270 crores.

There is every possibility that India may start getting the MiG-29M even before the U.S. Senate gives the nod for supply of F-16's to Pakistan.

Highly placed sources confirmed that the purchase order for MiG-29M's was placed during the visit of Army Chief General B.C. Joshi to Moscow in March this year. However, officials in South Block said the Chief of the Army Staff had gone to Moscow to hold talks on spares that have not been forthcoming since the disintegration of the former USSR.

But the officials did not rule out the possibility of buying MiG-29M's to augment the MiG-29 fleet. The Mikoyan series aircraft are comparable to the American F/A-18 Hornets. They are very effective against low-flying targets because of the shoot-down facility.

The MiG-29's have a combat radius of 1,150 km (620 nautical miles) in a single sortie as compared to the F-16's 845 km. The Russian aircraft has a maximum speed level of mach 2.23, which is equal to 2,335 kmph or 1,260 knots.

The F-16's, however, have nine external pylons and can carry an armament load of up to 4,700 kg. This is more than the MiG-29's capacity of 3,600 kg, which are loaded on to six pylons.

But the MiG-29's are fitted with AA-10 and AA-11 air-to-air missiles and also have additional cavities to carry bombs and rockets. The Doppler radar and a six-barrel 30 mm Gattling-type guns are the other distinct features of the MiG-29.

Meanwhile, it is understood that India has sorted out the problem of spares for the armed forces. Sources disclosed that India okayed the MiG-29M deal only after an assurance that the Bangalore-based Hindustan Aeronautics Limited (HAL) would serve as the service outlet for all types of MiG's for the entire South and South-East Asia region.

Sources in the South Block said India was in the process of selling a particular series of the aircraft to Malaysia, whose Air Force personnel were trained in Pathankot recently.

India is also in the process of negotiating with the Malaysian Government on the sale of Russian Mi-25 attack helicopters. These helicopters are used for anti-armour warfare and can provide an airborne platform to achieve tactical battle area supremacy. The Mi-25 is believed to be an answer to the American Cobra helicopter.

Meanwhile, Agni, successfully test-launched twice, has signalled India's emergence as a growing power in the entire Asian region. The 1,800-2,500 km range missile can cover a large part of China, West Asia and South Asia.

Even if the Americans are likely to use every means to make India sign the nuclear Nonproliferation Treaty (NPT), ministerial sources said India would not under any circumstances abandon its missile programme. But the sources did not rule out a delay in the missile plans.

While the Agni continues to be India's best bargaining block, the Prithvi missiles are ready for induction in the Army.

Reportage on Successful Agni Missile Firing

First Intermediate Range Missile

94WP0078A Madras *THE HINDU* in English
121 Feb 94 p 9

[Text] New Delhi, Feb 20—India's efforts to master ballistic missile technology has crossed a major milestone with the successful test of the Agni missile on Saturday. This was the third test of the two-stage missile. Agni was first successfully tested in May 1989 and the second partially successful test took place in April 1992.

Possessing a potential range of over 2,000 km, the Agni is India's first Intermediate Range Ballistic Missile

(IRBM). Described as a "technology demonstrator," the missile can deliver one tonne payload. This is twice the estimated weight of nuclear warhead and the success means that India can deliver a nuclear strike if it chooses to weaponise.

The focus of the launch was to guide better and more accurately, a sophisticated re-entry vehicle or the warhead of the missile. "Other gains are incidental," says a highly placed source at the Defence Research and Development Organisation (DRDO).

But, Saturday's test is also expected to prove an extension of the missile's range, though no confirmation on this count is as yet available. Experts account the 19 tonne weight of the missile, which is five tonnes more than the weapon tested in 1989, primarily due to the excess fuel it is carrying. This would be translated to an extended range, it is presumed.

The 21-metre Agni tested on Saturday is also longer in comparison to the weapon launched in 1989. The Agni on its maiden flight had measured 19 metres.

While modifications on the warhead are possible, pre-launch indications suggested that the re-entry vehicle is of a manoeuvring type. Small fins were attached at the base to facilitate the warhead's movement.

Challenging Task

Controlling the flight path of the re-entry vehicle is a particularly challenging task. The warhead which moves towards the target at a rapid speed crosses the earth's atmosphere. Making the warhead withstand the high temperatures (around 3000 degree Celsius) it encounters poses a major challenge to scientists. Keeping the warhead stable during this phase is also vital.

One of the unique features of the Agni re-entry vehicle is its heat shield. A carbon-carbon composite heat shield enables it to withstand temperatures 5,000 degree Celsius. In addition, the heat shield is ablative. It melts and chars and its outer layers peel off. It takes away the heat, layer by layer.

Guiding the warhead is also difficult because the vehicle during its final phase can be jammed. However, DRDO scientists have discounted this possibility.

Apparently Agni's re-entry vehicle resembles the Pershing II warhead. The guidance technology on the Pershing II is so accurate that the warhead lands within 45 metres of the target area.

Two-Stage Configuration

The Agni poses a unique two-stage configuration. While the missile is hurled into space by a solid fuel booster, the liquid fuelled second stage leads missile warhead to its predesignated target.

With premium on accuracy, the choice of a liquid second stage was deliberate.

DRDO scientists, under whose overall supervision the missile programme is being carried out, agree that the first stage rocket is based on an indigenous Satellite Launch Vehicle (SLV-3) design. The liquid fuel stage is based on the Prithvi design. But auxiliary propulsion is added to the missile to enable it to fly higher.

Best Use Urged

94WP0078B Madras *THE HINDU* in English
21 Feb 94 p 6

[Article by C. Raja Mohan: "Agni: India Should Stand Up to Pressures"]

[Text] Washington, Feb. 20—With the successful third test firing of the medium range Agni, an important phase in India's missile development has come to an end. The scientific community of the Indian Defence Research and Development Organisation (DRDO) has delivered in a grand manner. It has proudly propelled India into the league of great powers. Now it is up to the Prime Minister, Mr. P.V. Narasimha Rao, and the military services to put the missile technology that has been demonstrated to the best possible political and strategic use. There has been some political dithering and vacillation in the past in the face of external pressures to forego the development of India's missile technology. Hopefully that phase of hesitation too has come to an end.

The DRDO has now successfully demonstrated the key aspects of long range missile technology, effective integration of different stages of the medium range missile and re-entry of the warhead and its terminal guidance have now been proven. The Agni missile can deliver a payload of one tonne over a distance of 1,500 km or a smaller warhead of 500 kg over a longer range of 2,500 km. The design of such payloads for the missile is well within the competence of Indian scientists.

The leadership of the Indian military and political establishment must now take the appropriate organisational, financial and political decisions in conformity with the national security needs. The late Prime Minister Rajiv Gandhi had approved three test firings of the Agni missile as part of technology demonstration of India's long range missile capabilities. Mr. Rao now has the opportunity to transform this technological demonstration into all important strategic asset.

To be sure, India must expect some negative reaction, particularly from the U.S. to the successful testing of the Agni missile. It is certainly likely that Washington may not lift the sanctions against the Indian Space Research Organisation (ISRO) that expire in May 1994. If New Delhi can signal that it is fully prepared to brush aside these pressures and proceed with the operationalisation of the Agni missile, it will earn grudging respect from the U.S. The alternative option of giving up the development and deployment of the Agni can only be disgraceful.

Humiliating MTCR Conditions

It is possible that the U.S. will dangle the prospect of lifting the sanctions on ISRO and even a membership of the Missile Technology Control Regime (MTCR), if India is ready to forego its missile development. Any such proposal deserves nothing but contempt. India should not allow the U.S. or any other nation to set Indian technological priorities. Besides, the conditions for entry into the MTCR have been humiliating. When Argentina was allowed into the MTCR last year, the U.S. demanded and got rights to verify the complete destruction of all components of its Condor missile programme. Brazil had last week applied for the membership of the MTCR. It remains to be seen what kind of conditions the U.S. will demand before it lets in Brazil. India can join the MTCR only on one basis: in return for abiding by the export control regulations of the MTCR, New Delhi will have full access to the civilian space technologies. India must make it clear it will accept restrictions on its missile development and deployment only as part of a larger global regime of missile disarmament.

There is little reason for India to be frightened by the current rhetoric on nonproliferation or the immediate threats to impose more restrictions on technology transfer to India. The debate on export controls in the U.S. is undergoing a major transformation. The American business community and the Commerce Department are pushing for a substantive liberalisation of export controls, driven as they are by the need to promote American jobs and exports. The U.S. Defence Department, too, motivated by the desire to protect the competitiveness of American aerospace industry and its technological base, has come round to supporting the loosening of export controls except in the so-called "choke-point" technologies that are critical for the manufacture of mass destruction weapons. Traditionally, the Pentagon has been the most vocal opponent of liberal American technology exports. As India expands its abilities to develop and export space related technologies including missiles, the U.S. will find that it is in its own interest to get India participate in the missile technology control regime, as an equal partner. In the final analysis, it is only those countries that can show the determination to stand up to pressures that will be accepted as great powers.

The Indian Government has two options on the Agni missile. It can decide on early deployment of a limited number of medium range missiles. Or it can authorise more tests of the missile to improve the overall design and reliability. The improvements in particular could focus on a better "aspect ratio," by reducing the height of the missile and increasing its width.

India is said to have appropriate capability in solid propulsion technology to achieve this. In any event, further work on the improvement of the missile and an early decision on its operational deployment need not be mutually exclusive.

Difficulties Expected

94WP0078C Madras *THE HINDU* in English
27 Feb 94 p 7

[Text] New Delhi, March 2—The Government has decided not to induct Agni, the indigenously-developed intermediate range ballistic missile (IRBM), into the armed forces at this stage, though the missile was successfully test-fired on February 19 as a technology-demonstrator.

Instead, the Government for the time being, wants efforts concentrated on refining certain parameters of Agni, it is learnt.

When the Integrated Guided Missile Development Programme was conceived in 1983 and the decision taken later to have three test-firings of the missile, it was not decided what to do after this was achieved. However, the issue was considered in some detail at the highest political level recently.

India's decision to develop its own IRBM was frowned upon by the West, especially the United States, because a missile of Agni's capability can deliver a nuclear payload and leave the enemy with no response time. However, no foreign power has made any public pronouncement after India's capability was proved in the IRBM field last month. Nor did other Governments express themselves through official or diplomatic channels.

It is to be seen if the U.S. Assistant Secretary of State for South Asia, Ms. Robin Raphel, broaches the subject when she comes here for discussion this month.

Among the parameters of Agni that the decision-makers want refined is the guidance system of the missile so as to reduce the Circular Error Probable (CEP). The effort is to increase the accuracy of the IRBM.

Decision on Induction

94WP0078D Madras *THE HINDU* in English
1 Mar 94 p 1

[Article by Atul Aneja, New Delhi: "Agni Takes India's Progress to the Skies"]

[Text] The successful third test of the Agni long range missile last week has set the stage for a potential Indo-U.S. row on nonproliferation. But with growing domestic, industrial, and academic pressure, Washington may find it difficult to arm twist New Delhi into scrapping its ambitious missile programme.

After the confirmation on 19 February that India is technologically moving towards a position from where it can deliver a nuclear device at a target about 2000 km away, the U.S. may announce new penalties to halt India's drive to master intermediate-range ballistic missile (IRBM) know-how. New American laws on high-technology exports are round the corner.

Indications from Washington suggest that the two-year ban on the Indian Space Research Organisation (ISRO), imposed in May 1992, may be extended. With nonproliferation high on the Clinton Administration's agenda, Agni's successful test may only prompt the U.S. to order further restrictions. Already, the Clinton Administration has said that it wants to discuss with New Delhi, the steps to "meet our overall nonproliferation goals and the requirements for waiving sanctions" against ISRO.

But, the U.S. has to contend with a powerful counter-view. In the American debate on export controls, it is being argued that the restrictive regimes have not had the desired impact on proliferation. On the contrary, countries subjected to restrictions have gone ahead with their programmes. Some of them have even emerged competitors to American industry. The Council of Competitiveness, an organisation including chief executives of American business, university representatives and organised labour members, in a recent report has brought these arguments into focus. The study notes that the denial of super-computers to India and China have been a "significant factor" in driving these countries to master super-computing capabilities.

"The Chinese manufacturer poses a threat to western manufacturers in the Chinese market, and the Indian manufacturer has enjoyed a modest success in the world market," the study observes.

On other counts too, the curbs have made a negative impact on American industry. As many as 120,000 American jobs were affected by these decisions, the study estimates. The U.S. also lost \$6,000 millions in exports.

Though the U.S. Congress is willing to look afresh at the export controls, the State Department continues to feel that restrictive regimes are useful tools. Nevertheless, Congress is considering a new export control package. Some of the ideas call for liberalising and simplifying export codes. Others aim at tightening restrictions on dual use exports.

Despite the predominance of indigenous material in Indian missiles, American restrictions can affect India in a few critical areas. Indian missiles are still dependent on sophisticated American components. Some advanced chips, which can stand the rigours of military use, are purchased from the U.S.

Indigenising is difficult because of Western curbs on the supply of machinery to fabricate components of such precision. From a commercial viewpoint, the enormous costs inhibit this. In addition, purchases from third sources are difficult. Most countries which possess these items are members of the multilateral Missile Technology Control Regime (MTCR).

Theoretically, India, at the moment, will have to contend with the U.S.-led regime of western technology restrictions, targeting Indian space and missile programmes.

Restrictions inhibiting the flow of sophisticated technology are imposed under the MTCR.

Made up of 22 countries, the regime aims at restricting missile development outside a predominantly western club. It provides for punitive action against any country developing missiles which can cause mass destruction more than 300 km. away. Penalties are enforced, mainly by denying advanced technology, which have both a military and civil use.

MTCR members have or are expected to frame domestic laws restricting export of dual use knowhow. Laws have to be supplemented by lists of such technologies. Thus, after the MTCR charter was signed by seven developed countries in 1987, the U.S. passed the National Defence Authorisation Act (NDAA). In May 1992, the NDAA was invoked to impose a two-year ban on technology sales to the Indian Space Research Organisation along with the Russian space agency, Glavkosmos. Validation licences, which could permit American companies to sell items to the ISRO were put on hold for two years. It was argued that the cryogenic engines ISRO intended to procure from Russia could enable India to develop an Inter-Continental Ballistic Missile (ICBM). The GSLV [Geosynchronous Satellite Launch Vehicle] rocket which would enable India to launch satellites in the geosynchronous orbit could also yield the strategic missile, it was felt.

Apparently, American fears were reinforced when India, for the second time in April 1992, tested the Agni missile. The SLV-3 rocket which was developed by the ISRO was modified to become the first stage of the Agni.

Countering the American argument, India felt that the real U.S. concern was not security. A Geosynchronous Satellite Launch Vehicle would have enabled India to quickly enter the lucrative satellite launch market, so far the domain of the West, though China has broken into these exclusive western preserves.

Tightening the screws on India further, the U.S. Commerce Department in 1992, made suitable amendments to target specific space and missile related projects. Amending the Export Administration Regulations (EAR), an interim order was passed to lay new restrictions on a range of projects. U.S. companies were told to obtain special validation licences destined for the Agni and Prithvi projects of the integrated guided missile development programme.

ISRO's SLV-3, the Augmented Satellite Launch Vehicle (ASLV), the Polar Satellite Launch Vehicle (PSLV) and the (GSLV) also featured on this list. Since the restrictions were project centred, all enterprises in the U.S. and India which contributed to them were affected. As many as 78 institutions and 107 Indian industries contribute to the ISRO's programmes.

After trying to scare India with the restrictions it can impose, the U.S. may now make a fresh bid to force the country to join the MTCR. But, this move is unlikely to

succeed. Like the Nuclear Nonproliferation Treaty (NPT), which India rejects, the MTCR is also discriminatory. Countries have joined the MTCR either as members or adherents. Unlike the original seven western trading partners, adherents do not participate in MTCR meetings. Neither are they involved in moving amendments and resolutions. It is extremely doubtful that adherents find access to sophisticated western technology, as a reward for acquiescence. Argentina, a MTCR adherent, had faced the humiliation of destroying the assemblies of the Condor 2 launchers, in the presence of Western verifiers.

After Agni's launch, India will have to choose from one of the three options: convert Agni from a test to a "battlefield" weapon, continue with experiments after stating an intent only to develop and demonstrate IRBM technology, or drop the project altogether.

One view making the rounds among defence experts here is that India should develop the missile, but not fit it with warheads. Retaining the option to "arm" the missile can also signal that India is driven not by belligerence, but with a desire to enhance security. This non-provocative deployment, with the deterrence spin-off in the neighbourhood, is also consistent with India's global position on missile development. Destruction of missiles is the responsibility of all, not of a select few.

The move will have a significant impact. The powerful commercial lobby in the U.S. which says that restrictions on large countries, such as India and China, are potentially counterproductive, can also be armed with a new argument. This could well open the debate among MTCR members to include India as a missile power, and not as an adherent. There is a free exchange of technology among key MTCR members. But the regime enjoins on the members not to supply these items outside their fold.

In the face of possible retaliation from the U.S. scientists have argued that there are ways to break the restrictions log-jam. One way to overcome dependence on items such as military grade chips, is to buy commercial grade components, which are available more easily. Technologically, it is feasible to use these chips in military hardware, after screening them suitably.

Akash Missiles To Be Ready by 1995-96

94WP0079A Bombay *THE TIMES OF INDIA* in English
3 Mar 94 p 7

[Text] New Delhi, March 2 (PTI). The developmental work on "Akash" and "Nag" missile systems is expected to be completed by 1995-96, after which these missiles are expected to be inducted into service-use, the Lok Sabha was informed today.

In a written reply to Mr. Harin Pathak, the minister of state for defence, Mr. Mallikarjun, said the test fire of "Prithvi" has not been postponed.

Agreement With IAEA on Tarapur Safeguards

India Volunteers

94WP0080A Madras *THE HINDU* in English
24 Feb 94 p 1

[Article by K.K. Katyal: "Agreement with IAEA on Tarapur Plant"]

[Text] New Delhi, Feb. 23—Through an agreement with the International Atomic Energy Agency [IAEA], India has volunteered to keep the Tarapur nuclear power plant under international safeguards. India was not legally bound to do so, after the expiry of the arrangement with the U.S. for the supply of enriched uranium, but has taken this step as a goodwill gesture—in the belief that it would be helpful in the efforts to keep the plant operational with the help of the reprocessed spent fuel at a later stage.

The draft agreement, submitted by India in December last to the IAEA, has been approved by its board of governors at a meeting which began in Vienna on 21 February—according to information received by the Department of Atomic Energy and, perhaps, also by the External Affairs Ministry.

The temporary bilateral arrangement between India and the IAEA, that had been in force after the expiry of the 10-year agreement with the U.S. on 24 October last, has now been put on a permanent basis. Before that date, the safeguards were applicable at a trilateral level, involving the U.S., the original supplier of enriched uranium.

Chequered History

The Tarapur arrangements have a chequered history. While the agreement was still valid, the U.S. found it difficult to continue the supply because of the imperatives of its domestic legislation. As a result, France came in the picture—and enriched uranium was made available to India, though under the framework of the Indo-U.S. agreement. France, as such, had no independent standing and it stopped the supplies at the end of the time-frame envisaged in the agreement with Washington.

The agreement with the IAEA has no major immediate implications, as the plant has enough fuel in stock to keep it going for two to three years. India was under no obligation to approach Vienna with the voluntary offer, but it was done as a confidence-building measure and to dispel misunderstandings about the use of nuclear energy for peaceful purposes. This, New Delhi calculates, would also facilitate its job in working for a long-term arrangement as the plant has a life of another 15 years.

The U.S.—as also France—had expressed unwillingness to extend the arrangement after 24 October 1993. Also, the U.S. did not accept India's plea to secure enriched uranium from other sources. The other course open to India was to reprocess the spent fuel which, in any case, posed major storage problems. This point figured in the

discussions in Washington in September last by then Foreign Secretary, Mr. J.N. Dixit. The U.S. was non-committal—it neither said "no," nor "yes." Efforts in that direction are to be continued.

The acceptance of continued international safeguards for the Tarapur plant does not mean a departure from India's stand against the nuclear Nonproliferation Treaty or its variants, suggested by the industrialised nations. The Vienna agreement means extensions of the international safeguards for Tarapur, that had been in force for the last 10 years—now under a bilateral arrangement.

Agreement Hailed

94WP0080B Calcutta *THE SUNDAY STATESMAN*
in English 27 Feb 94 p 8

[Editorial: "Accord on Tarapur"]

[Text] New Delhi has done well to subject the use of indigenous fuel for the Tarapur atomic power station to international safeguards by involving the International Atomic Energy Agency, thereby sending out the message that there is nothing unduly secretive about the country's nuclear installations. It will be noted that the gesture is voluntary and it should make it easier for the Agency to respond. Ever since the Americans and then the French stopped the supply of enriched uranium for the Tarapur plant, governed by the 30-year agreement drawn up in 1963, its continued operation has been uncertain because of the non-availability of basic fuel. The only way to keep the plant was to substitute mixed-oxide fuel (MOX) for the imported uranium, the availability of MOX being dependent on plutonium extracted from the plant's spent fuel. Washington earlier tried to put a spoke in the wheel by claiming ownership of the spent fuel at the plant, but it could not make any headway because of New Delhi's determined opposition. The decision to put the indigenous fuel under IAEA [International Atomic Energy Agency] inspection is one way of showing the world that Indian nuclear expertise has come of age, not something that can be expected to be warmly welcomed in many parts of the World.

Indeed, the old game of smearing the Indian nuclear effort has once again begun in right earnest as the date for review of the nuclear Nonproliferation Treaty comes up. In October last year, the CIA is reported to have told a Senate committee that India had "no valid economic case to make for separating plutonium or enriching uranium," letting the cat out of the bag with the lament that "reprocessing and enrichment would make India independent of foreign suppliers of enriched uranium." More recently, a report was run on the popular U.S. television programme "Sixty Minutes" which said that the Indian nuclear programme was a "dangerous failure" which could lead to health problems. It quoted a British academic as saying that there was no other country "with as bad a record" in this field. Such comments can be

contrasted with the recent statement of the IAEA Assistant Director-General for Nuclear Safety that India had made substantial progress in implementing the required safety standards "which are comparable to internationally acceptable levels." The assault on the country's nuclear programme is likely to increase and the propaganda will intensify in the months ahead and for a variety of reasons. The idea to involve the Agency is a good one and the involvement should be extended.

Scientist Comments on Launch Capability

94WP0081A Madras *THE HINDU* in English
21 Feb 94 p 4

[Text] Coimbatore, Feb. 20—"India is leap-frogging in the most guarded area of space technology and, through its progressive self-reliant approach, it has shown to the world its capability in the launch vehicle technology," Dr. S.C. Gupta, Member, Space Commission, said on Sunday.

Delivering the GRD [expansion not given] endowment lecture at the PSG [expansion not given] College of Technology here, Dr. Gupta said that with the successful launching of SLV-3 [Satellite Launch Vehicle] and the ASLV [Augmented Satellite Launch Vehicle] and the nearly-successful launch of the PSLV [Polar Satellite Launch Vehicle], the launch vehicle technology in India had truly arrived. Operationalisation of the ASLV and the PSLV was round the corner, as the ASLV-D4 would be launched by April and the PSLV-D2 in the middle of this year.

With the operationalisation of the PSLV, India would be able to launch its own remote-sensing satellites of one-tonne class. This was equivalent to launching 2.5-tonne class satellites on low earth orbits. This meant India had built up from 40-kg capability in 1980 to 100 kg capability in 1992 and would have 2,500 kg capability in 1994.

Though much advancement had been achieved in the space technology economic and technological constraints were still felt. Funding was liberal but it was being done on a project-to-project basis. It was imperative to broaden the resource base. By involving academic and research and development institutions, on the one hand, and industries, on the other, the resource base could be enlarged.

To a question by Mr. G.R. Karthikeyan, managing trustee of the PSG Institutions, Dr. Gupta said India's approach was "progressive self-reliance" in space technology. Whatever technology available elsewhere would be supplemented with domestic resources. The objective was to attain cost-effectiveness and time-effectiveness.

Mr. Karthikeyan suggested introduction of Tamil medium in management courses.

Spokesman Clarifies Report on Capping of Missile Plan

BK0205150294 Delhi *THE HINDUSTAN TIMES*
in English 21 Apr 94 p 22

[Text] New Delhi, April 20 (HTC)—In a cautiously worded, handwritten note, an official spokesperson of the Government of India today sought to clarify the report on the Agni missile plan being temporarily capped, which appeared in this newspaper today.

While describing the report as "unfounded and baseless," the note asserted that "after the recent successful flight of Agni, all the objectives set for this mission have been achieved." This, in fact, suggests that the project is being abandoned altogether, whereas the HT report had only said it was being put on hold for the present.

While not contradicting that the DRDO [Defense Research and Development Organization] had been denied the [Indian Rupees] Rs 5 crore it had sought for conducting three more Agni test flights, the official note says that fund requirements of different departments are decided "in relation to progress of various projects. Individual scheme-wise allocation is not undertaken at the Government level."

Development of Indigenous Cryogenic Engine Discussed

BK3004135294 Delhi *THE PIONEER* in English
25 Apr 94 p 1

[by Special Correspondent]

[Text] The first indigenously-built cryogenic engine to power the Geostationary Satellite Launch Vehicle (GSLV) of the Indian space programme will be ready in four years.

Impressed with the performance of the Space Department, the Government is likely to double the Plan outlay on space research in the on-going Eighth Plan period from 1,804 crore to Rs.[rupees] 3,500 crore, originally sought by the department.

This is revealed in the tenth report submitted to the Standing Committee of Parliament on Science and Technology, comprising members of both Houses.

Though the contract between the Indian Space Research Organisation (ISRO) and the Russian space organisation Glavkosmos had been modified under the threat of U.S. sanctions, ISRO was in a position to develop indigenous technology, the panel said.

The committee was informed by the representatives of the Space Department that industries like L&T [Larsen and Toubro], Walchand Industries, Godrej, NOCIL [National Organic Chemical Industries Limited] and Andhra Sugar had been involved in producing various subsystems and hardware for the cryogenic engine.

Secretary (Space) Dr. K. Kasturirangan informed the committee that according to the modified agreement with Glavkosmos, in addition to the supply of the originally planned two cryogenic blocks, two more flight stages and two ground models would be supplied in lieu of the technology transfer, within the original agreement cost of Rs. 235 crore.

ISRO has also exercised the option to buy three additional cryo stages at a cost of U.S. \$3 million each as negotiated in the original contract, Dr. Kasturirangan told the committee.

The committee was also informed that, for this programme, the Government has approved an outlay of Rs. 245 crore.

The body wanted the Department of Space to make concerted efforts in this direction because with the realisation of the cryo stage, if the GSLV is operationalised, the Indian launch services would be priced much lower than the current international market price.

The indigenous cryogenic engine, burning liquid oxygen and gaseous hydrogen, will power the upper-most stage of the GSLV which will give ISRO the capability to launch 2.5-tonne class communication satellites into geostationary orbits. Such a capability, married to the ISRO's success in fabricating low-priced satellites, would provide the Indian space organisation a major slot in the international space launch market.

The committee was informed that the work relating to GSLV was proceeding and that, so far, 216 technologies or processes developed had been transferred to the firms.

ISRO representatives told the committee that the next flight of the PSLV (Polar Satellite Launch Vehicle) would take place later this year. Asked about the reason for the failure of the PSLV's first flight last September when it failed to place the IRS-1E [Indian Remote Sensing-1E] satellite into orbit, they told the committee that the launch was "almost a success" and that barring a software implementation error, all the stages and their sub-systems had performed very well.

IRAN

Strait of Hormuz Thamen al-A'emmeh Missile Maneuver Reported

'Electronic Units' To Participate

LD2604175394 Tehran Voice of the Islamic Republic of Iran First Program Network in Persian 1630 GMT 26 Apr 94

[Text] The missile maneuver of Thamen al-A'emmeh [8 Shi'a Imam] started today in the general zone of the strategic Strait of Hormuz and on the waters of the Persian Gulf.

According to a report from the public relations and publicity office of the first naval zone of the Islamic Republic of Iran's Army, the shore-to-sea missile sites, warships and naval vessels as well as the personnel of the electronics units of the army and the Islamic Revolutionary Guards Corps will be participating in this maneuver, which will continue for one week in the strategic Strait of Hormuz.

'Marine Warfare' Tactics To Be Tested

LD2604202894 Tehran IRNA in English 1931 GMT 26 Apr 94

[Text] Bandar Abbas (Hormozgan), April 26, IRNA—The week-long "Thamen al-A'emmeh" missile maneuvers started in the strategic Strait of Hormuz in the Persian Gulf waters Tuesday.

Surface-to-sea missile, warships and electronic units of the Armed Forces along with naval units of the Islamic Revolution Guard Corps (IRGC) are involved in the exercise, code-named after the 8th infallible imam of the Prophet's household, 'Ali Bin-Musa al-Redha whose birth anniversary the Muslim world celebrated this week (11 Dhu al-qa'dah 148 a.h.—765 a.d.).

Units participating in the exercise will stage marine warfare and launch attacks on hypothetical enemy targets and test new marine war tactics under the command of the Khatam al-Anbiya HQ.

Meanwhile the three repaired warships, Tiran, Khadang and Zobin, and also a repaired R-H [as received] helicopter—all four which had sustained heavy damages during the Iraqi imposed war (1980-88)—are taking part in the maneuvers.

Captain Rahimi who supervised the repairment of the damaged warships told IRNA in Bushehr today that the repairs have saved the country 15 million dollars.

Captain Nek-Payam also told IRNA that the R-H helicopter which was destroyed 70 percent by the enemy was repaired by Iranian experts at a cost of rls. [rials] 100 million.

According to the captain the helicopter will help sweep mines from the sea bed.

Rocket Fuel Tested

LD2904175394 Tehran Voice of the Islamic Republic of Iran First Program Network in Persian 1630 GMT 29 Apr 94

[Text] The Thamen al-A'emmeh shore-to-sea missile maneuver ended today by achieving all its objectives. According to a report dispatched by the Central News Unit from the Persian Gulf center, during the concluding phase of this maneuver the brave personnel of the navy of the Islamic Republic of Iran [IRI] and the Islamic Revolution Guards Corps, by utilizing the most advanced missile system, performed the operations of firing a shore-to-sea missile with full success.

Rocket fuel manufactured by the IRI was used for the first time during these courageous operations, and the shore-to-sea missile precisely hit the hypothetical enemy.

On the last day of this maneuver there were also naval operations, tracking, reconnaissance and patrol operations. The flight units flew over the operational area, utilizing the most modern tactics and combat-defense inventions.

Russia Helps Build Bushehr Nuclear Power Plant

*NC2304181894 Tehran JOMHURI-YE ESLAMI
in Persian 13 Apr 94 p 4*

[Text] Bushehr—JOMHURI-YE ESLAMI correspondent: We have begun to build the Bushehr Power Plant.

An informed source at the Bushehr Power Plant said this to our correspondent, adding that following initial agreements with the Russians a few months ago, their experts began working on the first unit of the Bushehr Power Plant early this [Iranian] year [beginning 21 March 1994]. This unit is to be completed in four years, and will have a 1,000-megawatt output.

He added: So far 30,000 tonnes of the power plant's main parts have been brought into the country from Germany and are being kept in suitable storage areas. About 7,000 tonnes of the main parts of the power plant, which have been paid for and legally belong to the Islamic Republic of Iran, have been packed and sent to ports, and are ready for shipment to Iran, but regrettably they are being held up because the German Government will not issue an export permit on the basis of empty pretexts.

He added that unfortunately there is no information on what state these parts are in.

The informed source said that fortunately 90 percent of the damage inflicted during the imposed war has been repaired by the able hands of Iranian experts and the remaining 10 percent is currently being repaired.

It should be noted that the agreement for the construction of the Bushehr Power Plant was signed on 10 Tir 1355 [1 July 1976] between the Iranian Atomic Energy Organization [IAEO] and Kraftwerk Union of Germany for 7.8 billion DM [German marks]. On the basis of this agreement, the German company was to build a nuclear power plant approximately 18 km southwest of Bushehr, consisting of two pressurized light water units, each with an output of 3765 thermal megawatts and 1296 megawatts. Of the aforementioned amount, Iran has paid 5.8 billion DM. In addition, separate agreements for supplying the necessary fuel and 200,000 cubic meters of pure water needed by the power plant were signed. Thus, a total of 137,394,000 DM and \$43 million has been paid by the IAEO to Germany.

According to the same report, so far progress has been made on about 85 percent of the construction works, and about 65 percent of the mechanical and electrical works in the power plant.

IAEO Officials on Nonproliferation, Bushehr

*LD2104114094 Tehran Voice of the Islamic Republic
of Iran First Program Network in Persian 0700 GMT
21 Apr 94*

[Studio interview with Dr. Reza Amrollahi, vice president for atomic energy and director of the Iranian Atomic Energy Organization, IAEO; Engineer Dr. Mashayekhi, IAEO international affairs adviser; and Dr. Mohammad Reza Ayatollahi, Iranian representative at the International Atomic Energy Agency, IAEA; by unidentified announcer and citizens in the weekly phone-in program "In Line With The People, In Step With Officials"—live]

[Excerpts] [Passage omitted including quotations from Khamene'i and Khomeyni about the futility of nuclear weapons]

Announcer: Could you please answer the question which was posed on whether the hostile propaganda of western media has had any negative effect on the course of the activities of the Atomic Energy Organization [AEO] and what steps are being taken to confront all that propaganda?

Amrollahi: We are witnessing a psychological war in the world by the news media of certain countries. If you watched CNN a few days ago you would have seen that a CNN correspondent came and asked one of the officials of our country—I think it was Mr. Kharrazi [Iran's permanent ambassador] in the United Nations. He said: First, you have purchased submarines? Second, You have increased your defense budget. Third, you have nuclear capability. In other words, they have a number of presuppositions. It does not matter what the answers are. They only wish to instill certain ideas in the minds of their listeners. We see this very clearly. At least, I and all my colleagues feel this with all our being that they are not aïer finding out the truth. They only wish to indoctrinate those who are unfamiliar with our works, those in foreign countries, and wish to tell them that Iran wishes to do this or that.

I wish to ask a few questions of those who make such insinuations: Have we not signed the Nuclear Nonproliferation Treaty? Are we not a member of the IAEA? Do we not accept the nuclear treaty of the IAEA [as heard]? Why does the usurping Zionist regime not sign the Nuclear Nonproliferation Treaty? Why does it not accept the IAEA's nuclear treaty? Why do they not ask such questions of the latter? This shows that they have some ulterior motives, and they wish to insinuate certain things in the minds of the people abroad who are not in our country and who are not reached by our mass media. In brief, let me say that such hostile propaganda will have no effect on our work. However, I do not deny that

they will influence the minds of the people who have nothing to do with us and who live outside our borders. [passage omitted answering a question about a small number of solar energy reactors which are planned for some remote villages outside the electricity grid].

Announcer: There was a question about the use of nuclear energy in Iran.

Amrollahi: See. All our people know more or less that our most important aim is to complete our nuclear reactor which we have, which is incomplete. Eighty percent of its work is completed, and by today's estimate more than \$10 billion has been invested in it. In my view, in any country where there is such an investment in a project eighty percent of which has been completed, any sane person would try to complete it so as to generate electricity by it. We have made this huge investment, and the whole world knows that a nuclear reactor only produces electricity. This is what we are after. Our country is short of electricity and the best return on our investment is to complete it and to make use of it.

Let me also answer the other question which was asked about who is completing it. Unfortunately, the Germans fell short in this connection. They did not help and did not finish this project. They have kept us waiting for 14 or 15 years. Finally, we signed a contract with Russia. Work has been started for some time and they are finishing it. [passage omitted on history of nuclear energy in Iran].

Announcer: Dr. Amrollahi, when do you think the Bushehr reactor will be completed?

Amrollahi: God willing, according to the talks which we have with the Russians, it will be definitely completed in less than four years and will produce energy.

Announcer: Concerning [nuclear] disarmament—although of course we cannot call it disarmament, let us say about nonproliferation—Dr. Ayatollahi and Dr. Mashayekhi can you please tell us something in this connection?

Ayatollahi: [passage omitted on the dangers of nuclear weapons for the environment, the use of atomic weapons at Hiroshima and Nagasaki, and the nonproliferation treaty; asserting that not only the countries which do not have nuclear weapons should not produce them, but the big powers which also have them should get rid of them]. Concerning this western propaganda and the motivation behind that propaganda, all our nation, every hezbollahi member of the society knows the truth. However, let me refer to just one reason behind all this propaganda. This is my own personal analysis, and I may be able to produce some evidence for what I am saying.

After the collapse of the former Soviet Union the American spy agency [CIA] was made bankrupt. This is why you see the CIA director going to the U.S. Senate and beginning threats against the Islamic Republic of Iran. He engages in this propaganda claiming that the Islamic

Republic of Iran is pursuing a policy for the production of nuclear weapons and that Americans should be vigilant. There he is trying to save himself from bankruptcy, he wants to prevent the closure of his organization, he wishes to safeguard the budget of his organization, and wishes to safeguard his own prestige. At the same time, he wishes to initiate a new propaganda line that the Islamic Republic of Iran poses a threat.

Yes, Iran objects to the western democracy which is following a domineering policy in the world in such an absurd way. It questions that system and threatens it with its logical arguments. The whole world knows this. However, in an attempt to cast aspersions on the Islamic Republic of Iran and to distort the truth and achieve their goals at least in the short term, they are engaged in this propaganda. Let me also say that we do not pay any attention to all this propaganda. It will not have the slightest effect upon the decisions of the Islamic Republic of Iran and Iran's nuclear industry. We know that their propaganda is flimsy and no one will believe them. The IAEA is the only official international agency which is composed of various nations and the Islamic Republic of Iran is also an active member. That organization expresses its views. We have also announced truthfully and bravely that we are not after such a policy. From the outset we have believed that the policy of [acquiring] nuclear weapons is wrong and we will not pursue a wrong path. If you are suspicious and have some evidence for your suspicion, come and inspect. We have no objection. So far, they have also come. We have invited them. They have come and inspected and have admitted and confessed [that Iran does not have nuclear weapons]. The admission of this official organization as an international authority as regards the nuclear industry is sufficient for us, even though western media engages in all sorts of propaganda.

Unidentified citizen: I would like to ask a question about the role played by the country's Atomic Energy Organization in supplying our electricity requirement? I would also like to ask what happened to the Bushehr nuclear power station, and will it boost the power generation when it is completed?

Mashayekhi: Bushehr nuclear power station comprises two 1250 megawatt units. It was started by the Germans before the revolution and it was 85 percent complete during the last days of the Shah's regime. Unfortunately it was abandoned by the German side. [passage omitted giving reasons for interruption of the project during the Iran-Iraq war].

Today we are trying to reach an agreement with the Russian Government to complete the project. Of course work has started already and the Russians are studying the project so as to install their own equipment. God willing we will then see completion of the first project during the coming years. We can probably begin the operation of our first nuclear power station in four years time.

Announcer: God willing. Is it economical to depend on nuclear energy in Iran?

Mashayekhi: The world has answered this question already. You witness that most of the world countries are today striving to expand their nuclear power stations to generate electricity. Fossil fuel pollutes the environment and will run out. The world in the 21st century will have to face the problem of generating its electricity requirement by nuclear power. We are also one of those countries which should make the necessary investment today. [passage omitted]. The Supreme Energy Council has approved that we should supply 20 percent of the country's energy requirements by nuclear power stations.

Amrollahi: I wish to conclude the discussion by mentioning something about our proposal for the creation of a nuclear free-zone. The Islamic Republic of Iran is pursuing this proposal every year and has been doing so for a number of years. It is appropriate to mention here that the regional countries are siding with us gradually on this issue. The only real saboteur of this proposal is the regime occupying Jerusalem. May God's peace and mercy be upon you all.

IRAQ

Kurds Claim PRC Supplying Chemical Weapons

NC3004093694 Paris AFP in English
0817 GMT 30 Apr 94

[Text] Damascus, April 30 (AFP)—An Iraqi Kurdish opposition group on Saturday alleged China was supplying Iraq with chemical weapons through a third country.

"Kurdish police intercepted on the night of 17 April two trucks carrying 19 tonnes of sodium phosphate used to make mustard gas and chemical weapons," a statement by the Patriotic Union of Kurdistan (PUK) said.

The chemicals were smuggled into Iraq through a "neighbouring" third country, according to the statement received here by AFP which did not identify the country.

The truck drivers "admitted during questioning" they were trying to transport the chemicals through Kurdish-controlled northern Iraq to regions controlled by the Iraqi central government.

LIBYA

Tarhunah Chemical Weapons Plant Described

BR2104134594 Milan PANORAMA in Italian
16 Apr 94 pp 107-109

[Silvia Aloisi report: "Al-Qadhdhafi's Secret Weapon"—all Libyan place names as published]

[Text] Mu'ammarr al-Qadhdhafi's deadly secret is hidden in the sandy desert, at Tarhunah, 65 kilometers south-east of Tripoli. It is here that the Libyan leader is having

an enormous installation built for the production of chemical weapons, thus complementing the existing production plant at Rabta.

For years the U.S. secret service had suspected al-Qadhdhafi of planning to build a second chemical plant. Rabta technological center's Pharma-150 plant was detected by the Pentagon in 1988, thanks to photographs taken by the Keyhole satellite. It was immediately defined as "the greatest chemical weapon production plant in the Third World. It was pointless for Tripoli's colonel to deny the facts and say that the plant was only a harmless pharmaceuticals factory." First Ronald Reagan and later George Bush repeatedly threatened to bomb the plant unless al-Qadhdhafi agreed to an international inspection. The use of force, however, proved unnecessary, since in March 1990 the Rabta plant was half-destroyed by a mysterious fire, which the Libyan authorities attributed to Western-instigated sabotage.

The Tripoli government has not forgotten American threats nor, above all, the allied bombing of Iraqi military installations during the Gulf War and, subsequently, in 1993. Al-Qadhdhafi's decision to have the suspect plant and materials transported to a new secret site was therefore predictable. This, in fact, would enable him to open the doors of the entirely rebuilt Rabta plant to UN inspectors, as a sign of goodwill toward the West.

The construction of the new Tarhunah plant was entrusted to the Jowfe state-owned enterprise, a bogus company which was set up to purchase the necessary equipment for building the plant and manufacturing poison gas. The plant, which is scheduled to become operational by 1995, will be capable of producing mustard gas at the rate of 1,000 metric tons a year, Sarin gas (90 metric tons), and Soman gas (1,300 metric tons). All of these substances are highly toxic to human beings: A small drop is enough to kill an individual within a few minutes.

Suspensions concerning Tripoli's intentions were aroused by the discovery, in England, of a Jowfe purchase order for two chemical production installations. The contract, worth half a million pounds sterling (approximately 1.2 billion lire), had been awarded to the Multinational Engineering Group company, which is part of the British APV company. The deal was camouflaged by means of a three-way operation: Jowfe contacted APV's Malaysian subsidiary APV Hills and Hills, which passed on the order to its parent company in London. In addition to the equipment, the order included materials for gas production and, in particular, pinacolone alcohol, the basic component for the production of Soman nerve gas.

Other toxic substances were supplied to Jowfe by the Belgian company Hassco, based in Ostend. Among them, ethylene oxide, used for manufacturing mustard gas and incendiary bombs, and dimethylamine, a component of Tabun nerve gas. It is difficult, however, to draw up precise accusations since many toxic products

used for chemical weapons are commonly used as fertilizers or pesticides, and are therefore not included in the international list of "risk" substances whose export is forbidden. Ethylene oxide, for example, is used for the production of industrial resins and detergents.

However, the nature of the Tarhunah plant, which is officially presented as a petrochemical complex, also seems to be confirmed by the type of materials bought for its construction. Libya is currently subjected to an international embargo because of its involvement in the 1988 terrorist action against a Pan Am Boeing 747 over Lockerbie. Tripoli is refusing to extradite the two Libyan agents who are suspected of having planted the bomb in the airliner. However, getting round the UN embargo was easy: In fact, the Jowfe company obtained—from Switzerland—the technical specifications for the construction of parallel underground tunnels, 150 meters long, designed by the Sauer engineering company of Salzburg (Austria). This type of tunnel is commonly used in other secret military installations. Furthermore, Libya purchased chemical weapon production equipment whose internal components are covered with enamel or teflon—materials that are extremely resistant to corrosive toxic substances. A sophisticated Swiss air-purification plant—protected by special fire-resistant materials—and a computerized system enabling instruments to function automatically are considered further evidence for the military intended use of the Tarhunah complex.

Libya did not subscribe to the international convention against the proliferation of chemical weapons, which was signed in Paris in January 1993, and it has always refused to have its chemical installations open to international inspection. The Tripoli government supports

the position taken by the majority of Arab League countries, which make their possible adhesion to the convention conditional upon international inspection of Israel's secret nuclear installations. In fact, chemical weapons are considered the Arab countries' response to the Jewish state's nuclear potential.

The discovery of the Tarhunah plant may trigger off a new crisis between Tripoli's colonel and the West. The Libyan Government is already facing trouble on its internal front, following the violent anti-regime revolt which broke out last March in the small town of Bani Walid—although al-Qadhdhafi's personal power does not seem to be seriously called into question. The colonel survived the administrations of his long-standing enemies, Reagan and Bush. But Bill Clinton may well decide that the moment has come to resume the hostilities.

YEMEN

House Approves Country's Membership to IAEA

JN2704073694 Sanaa Yemeni Republic Radio Network
in Arabic 2000 GMT 26 Apr 94

[Excerpt] During its session today, the House of Representatives reviewed the minutes from its last session. The House then resumed discussion about our country's membership to the International Atomic Energy Agency [IAEA] in light of the report presented by the Public Services committee affiliated with the House and also in light of the detailed memorandum and clarifications of the governmental representative on this issue.

The House approved IAEA membership after receiving the required majority of votes. [passage omitted on report by Islamic committee on public land use]

REGIONAL AFFAIRS

SS-25 Topol Missiles Redeployed From Belarus to Russia

LD2004135494 Moscow Ostankino Television First Channel Network in Russian 1100 GMT 20 Apr 94

[Video report by Mikhail Zotov; from the "Novosti" newscast]

[Text]

Announcer Tatyana Komarova: We would now like to show you for the first time footage our correspondent managed to film. Missiles brought out of Belarus under an agreement are being placed on alert duty in Russia.

Mikhail Zotov: In the village of Manan-Muchash, which means—short end—in the Mari language, not far from Yoshkar-Ola, a regiment equipped with missiles brought out of Belarus under the trilateral agreement has been placed on alert duty. You can see the missiles behind me. They are the newest strategic missiles, codenamed Topol, SS-25.

The military says these strategic mobile missile complexes have no computer program devised to eliminate targets in any country that might be a potential adversary. However, the on-board electronic systems are capable of retargeting the complex within a few seconds. Radar-proof warheads can reach any point in the opposite hemisphere.

Despite the fact that the army is troubled by many problems, the missile troops are relatively well-off, and in the words of Maj Gen (Nikolay Moroz), are capable of maintaining a guaranteed minimum of security and independence for Russia.

Meanwhile, the West is keeping a close watch on the Topols in Mari territory. Radar stations have registered the fact that our neighbors' satellites were monitoring the redeployment of the missiles. Space, however, remains the only place from where an outsider can watch Russian strategic missiles being placed on alert duty. On the ground it is only reporters from Ostankino's First Channel who can do it. *[Video shows a truck-mounted missile, an electrified wire fence with wasteland and a small building in the background; missile complexes on trucks being transported along a road]*

All Nuclear Weaponry in Kazakhstan Belongs to Russia

LD2804185494 Moscow NTV in Russian 1800 GMT 28 Apr 94

[Text] Some very interesting facts were made public today in Moscow's Artillery and Missile Forces Academy. A film crew from the Segodnya program were the only journalists present.

Correspondent Ivliyev: The nuclear strategic missiles based in Kazakhstan belong to Russia—this is the sensational news reported today by the Colonel General Igor Sergeyev, commander in chief of strategic missile forces, at a briefing for foreign military attaches which took place in the Dzerzhinskiy Military Academy.

[Begin Sergeyev recording] A month ago, on 28 March, an agreement was reached during the Russian-Kazakhstan talks on giving Russian status to the formations and units of strategic missile forces stationed temporarily on Kazakhstan territory. A timescale was also agreed for the withdrawal of nuclear warheads to Russian territory. *[end recording]*

Ivliyev: The agreement reached means that the personnel of the missile forces receive Russian citizenship. After the stage by stage withdrawal of missile force units from Kazakhstan is completed, the launch shafts will be dismantled, apparently by Russian specialists. Thus all three CIS states—Ukraine, Belarus, and Kazakhstan—on whose territory nuclear weaponry remained after the collapse of the USSR, now have a treaty with Russia on its removal. In a few years, if these countries fulfill their obligations, Igor Sergeyev stressed, they will become non-nuclear states.

Aleksey Ivliyev, Andrey Melikhov, NTV, from the Dzerzhinskiy Military Academy. *[Video shows: military attaches listening to Sergeyev; archive footage of missile control rooms and launch shafts; nuclear bunkers and missiles]*

RUSSIA

International CW Conference Held in Moscow**Conference Opens**

LD2104080994 Moscow 2x2 Television in Russian 0630 GMT 21 Apr 94

[Text] The second international conference—Moskon '94—on the problems of chemical weapons has opened in Moscow. It is being held by the Russian Academy of Sciences and the Russian Committee for Conventional Problems. (Sergey Bogdanov), chairman of an international commission for preparing the implementation of the convention, told journalists that recruiting personnel and providing special equipment will cost Russia \$18 million.

According to experts, within 10 years over 110,000 tonnes of toxic substances are to be destroyed in the world, including 40,000 tonnes belonging to Russia and 30,000 to the United States.

Kuntsevich Speaks

LD2004163494 Moscow ITAR-TASS in English
1353 GMT 20 Apr 94

[By ITAR-TASS correspondent Anatoliy Yurkin]

[Text] Moscow April 20 TASS—Ratification by Russia of the Convention on Chemical Disarmament is designed to stabilize the situation in the entire world, said Lieutenant-General Anatoliy Kuntsevich, a full member of the Russian Academy of Sciences. He opened here on Wednesday the second international conference on chemical disarmament, "Moskon '94," with a presentation on problems of elimination of chemical warfare agents.

Kuntsevich said Russia now possesses the world's biggest stock of toxic agents. According to official data, it has accumulated on its territory over 40,000 tons of products by the military chemical complex, which is enough to poison every living being on the globe.

The issue of recycling chemical warfare agents is out of the scope of Russia's interests. Participants in the conference noted that introduction of imperfect technologies might create hotbeds of ecological tension not only on the sites of war gases elimination but also in other regions. Experience gained in this sphere by other countries, in particular by the United States, cannot be copied in Russia. Developments by Russian researchers are opposed by foreign experts just out of considerations of competition. Some Western theoreticians and industrialists insist that lewisite be incinerated, while Russian specialists suggest extracting highly-pure arsenic out of this hazard chemical agent.

Russian supplies of this valuable material used in making solar energy plants designed to replace atomic stations in the next century will somewhat squeeze Western arsenic producers on the world market. Thus, purely scientific problems raised by participants in the forum are acquiring a very different meaning.

Professor Vladlen Malyshev, adviser to the head of the Committee for Conventional Problems of Chemical and Biological Weapons under the Russian president, told TASS that "Moskon '94" had drawn chemical researchers from many countries. In coordination with their colleagues from the Russian Academy of Sciences and producers, they are seeking for ways of safest destruction of Russia's huge stock-piles of toxic agents. In doing this, the adviser said, we should first of all take into account humane ecological problems and national interests.

"At the same time, researchers and specialists of the military chemical complex understand quite well that ratification by Russia of the convention on chemical

disarmament will stabilize the situation across the world, but this truth should also become an axiom for politicians, lawmakers and the public at large," Malyshev stressed.

Reprocessing Technologies Discussed

LD2204100494 Moscow ITAR-TASS in English
0916 GMT 22 Apr 94

[By ITAR-TASS correspondent Anatoliy Yurkin]

[Text] Moscow April 22 TASS—"Russia has absolutely unique technologies for the complex reprocessing of chemical warfare agents and nuclear wastes, which have no match in the world," member of the Engineering Academy Mikhail Sviderskiy said on Thursday, addressing a plenary meeting of the second international conference for chemical disarmament—"Moskon '94."

According to Sviderskiy, Russian scientists have developed and experimentally tested several production cycles for the complex reprocessing of chemical warfare agents and nuclear wastes. This allowed them to obtain new materials with quite unusual characteristics which, in the opinion of the expert, may be used in 21st-century technologies.

Sviderskiy said that the simultaneous reprocessing of chemical warfare agents and nuclear wastes would allow scientists not only to obtain materials with unique properties, but also to utilise huge quantities of depleted uranium accumulating on the planet. In order to process it into valuable products, Sviderskiy believes, "we need an international programme involving all the advanced countries. Excessive amounts of nuclear wastes have been accumulated in the United States, France, Britain, Germany, and also Russia. They are just as dangerous for the planet's ecology as the existing stockpiles of chemical warfare agents."

ITAR-TASS was told by Academician Valentin Fedorov, who is also attending the conference, that chemical disarmament should not only make up for the spendings made on the production of chemical warfare agents, but should also yield profits to the Russian treasury. In his opinion, only the reprocessing of lewisite into extra-pure arsenic will yield Russia profits running into many billions and will provide top-quality raw materials for new technologies in the most advanced sectors of industry. "We must not forget," the scientist stressed, "that Georgia, our traditional supplier of arsenic, has stopped selling it to Russia. In the meantime, the need for pure materials of this group is growing. For instance, the United States will need more than 100 tonnes of extra-pure arsenic by the end of this century only for its electronic industry. Other countries are also badly in need of arsenic."

Chemical disarmament, based on technologies proposed by Russian scientists, Fedorov believes, meet the national interests of Russia. "We must rely on our own forces, and we have no right to wait for somebody else to resolve our Russian problems," he stated.

'Critics' Were Excluded*PM2204142194 Moscow TRUD in Russian 22 Apr 94 p 2***[Oleg Zolotov report: "No Reduction in Secrecy"]**

[Text] "Moskon '94," the Second International Conference on Chemical Disarmament, ended yesterday in Moscow. It had been opened by Academician Anatoliy Kuntsevich, who only two weeks ago headed the Russian president's Committee for the Conventional Problems of Chemical and Biological Weapons.

As expected, the organizers did everything possible to exclude critics of official chemical disarmament programs from the forum. However, three dissident scientists—namely Lev Fedorov, Vladimir Uglev, and Vladimir Petrenko—managed to get in in the capacity of unofficial guests. But only representatives of the press were able to discover their point of view: All three were refused a place on the rostrum. Vladimir Uglev said in conversation with TRUD's correspondent that this was dictated by the Russian authorities' wish to dodge a decision on fundamental questions. In his words, whereas our American partners are attentively monitoring the quantitative indicators of the destruction of toxic substances, the methods of destroying these substances, which themselves present a serious threat to human beings, are still being kept secret and are monitored by no one.

The reasons for Kuntsevich's dismissal from the chairmanship of the president's committee are still unknown. Many link it to the fact that the academician's stance on chemical disarmament questions had started to encroach on Defense Ministry interests. His approaches required additional expenditure, and this displeased many people. As for Kuntsevich himself, he said in conversation with TRUD's correspondent:

"I do not know why I was fired. As an ex-military man, I refuse to comment on the fact."

Yeltsin Reaffirms Continued Moratorium on Nuclear Testing*LD2604194294 Moscow ITAR-TASS in English 1847 GMT 26 Apr 94***[By ITAR-TASS correspondent Boris Sitnikov]**

[Text] United Nations April 26 TASS—President Boris Yeltsin reaffirmed Russia's adherence to continue the moratorium on nuclear tests, General Secretary of the Geneva Disarmament Conference Vladimir Petrovskiy said at a press conference held at the UN Headquarters today.

"During talks with the UN secretary-general at the beginning of April, President Boris Yeltsin had expressed Russia's adherence to continue the moratorium on nuclear tests which was initially declared by ex-Soviet president Gorbachev," Petrovskiy said.

Petrovskiy noted that similar steps taken by other nuclear states would considerably help the multilateral talks on concluding a universal nuclear test ban treaty, now underway in Geneva. He called "realistic" the conclusion of such a treaty by the end of 1996. He said that a draft treaty will be presented for consideration in June this year.

In this context, he said that participants in the disarmament conference welcome the decision adopted by the United States in March to extend the moratorium on nuclear tests until September, 1995 as an "important contribution to the creation of a favourable climate for talks." "It is important to acknowledge that for the first time not only the U.S., Russia and Great Britain, but France and China are also now taking part in the talks, which directly affect their nuclear interests," Petrovskiy noted.

More Details of Alleged Uranium Smuggling*PM2704144194 Moscow TRUD in Russian 27 Apr 94 p 2*

[Igor Chernov report under the "Details" rubric: "Do You Want a 'Cylinder'?"]

[Text] Sochi—Staffers of the Sochi service of the Russian FCS [Federal Counterintelligence Service] and the militia have detained a resident of the resort who was trying to sell approximately 7 kg of a radioactive substance. Experts are now determining the exact weight and composition of this "bomb," but it is conjectured that enriched uranium-238 was in three cylindrical containers with a diameter of 15 cm and a length of 40 cm.

Aleksey Shishkov, chief of the FCS Sochi service, has reported that preliminary measurements showed that the radioactive background created by the containers exceeded the maximum permissible norms by a factor of two and that the cylinders posed a great danger. Incidentally, the owner of the commodity (it would be premature to name him) had put the containers inside tubes, but it "shone" pretty well even through the additional protection.

Intelligence officers are not yet saying how they happened upon the uranium dealer. It is only known that two capsules were first removed from two hiding places, while the third was discovered on the citizen when he was detained. He was arrested last weekend in the very center of Sochi. It is assumed that he intended to sell the containers to foreigners for a large sum in dollars.

Criminal proceedings have been instituted, envisaging punishment not only for stealing radioactive substances but also for violating the regulations governing their storage. The most interesting question, to which the answer must be found, is this: How and from where did

the dangerous capsules get to the Black Sea? According to militia staffers, the threads of the crime lead to the Urals region....

TV Shows 'Secret' Missile Test Center LD2304125094

[Editorial Report] Moscow NTV in Russian at 1800 GMT on 22 April on the 'Today' program carries a report on the Plesetsk missile test center in the town of (Mirnyy) in Arkhangelsk oblast. The correspondent says the site is not shown on maps because it is where military missiles have been tested since 1957. He says the country knew nothing of these tests for decades, including the successes or failures.

A film shows an aerial view of the town, a convoy of unidentified missiles on the road, and a missile transporter erector launcher (TEL) driving down a forest road.

The correspondent says these scenes are being shown for the first time, adding that disasters during missile launches in 1973 and 1980 resulted in the deaths of more than 50 people. Video clips then show an explosion, with two soldiers dragging a third past flames.

The correspondent then interviews an unidentified lieutenant colonel in front of a memorial. The lieutenant says: "I took part in organizing the funerals. Of course, it left a big impression. When I come here, I can see that moment."

The correspondent continues: "The Plesetsk range was not only a testing center. Events connected with the Cuban missile crisis in the 1960's form a special page in its history. Soviet missiles had been delivered to Cuba. The United States decided to destroy them from the air."

A video recording shows TELs manoeuvring and being driven out of hangars and along a road. The video then shows Major General Nikolay Moroz, assistant commander in chief of the Missile Forces, identified by caption, who says, "When it became known that the Soviet Union had 12 missiles with the range to reach America, this fact had a great influence on the politicians."

The correspondent says: "Some of these missiles were aimed at the United States from Plesetsk. Today there is a different atmosphere at the range. This is the secret computer center. Here they follow American missile testing. Moscow and Washington have agreed to exchange information on these kinds tests, and in accordance with the agreements the Americans have installed this equipment in Plesetsk. The Russian specialists have installed their own control instruments in the United State. Today the soldiers at Plesetsk are not only studying launches of other people's missiles; they are also developing Russian military missiles for the 21st Century. The Plesetsk state missile testing range. The fourth-generation Topol [SS-25] missile is being developed here" [as heard]. The video shows the correspondent standing in front of an SS-25 road unit.

Telemetry Equipment Idle While START II Unratified

PM0305102394 Moscow IZVESTIYA in Russian
30 Apr 94 p 2

[Viktor Litovkin report: "U.S. Equipment Idle at Russian Missile Range"]

[Text] The racks visible in this photograph are on the third floor of the Russian Strategic Missile Forces' State Test Range located in the town of Mirnyy, Arkhangelsk Oblast. It is equipment made by the U.S. firm of "Metrum-97" [name as transliterated] for reproducing telemetry data. More precisely, it is a magnetic tape player for decoding the flight parameters of strategic missiles developed and launched on test flights by the United States.

It was supplied here last year under a bilateral agreement between the countries, when the second Strategic Arms Reduction Treaty (START II) was signed. Similar Russian-made equipment—in six rather than two racks—has been set up on U.S. soil near Washington by our officers.

It was assumed that when the two states' parliaments ratified the treaty, the countries would, as a mark of the trust between them, exchange telemetry and other information on the performance of their new and old strategic missiles, their behavior in flight, and other important information which would allow the generals, politicians, and missile designers to take a calm and very respectful view of both sides' scientific and technical developments and to monitor them with greater confidence.

They even exchanged as a goodwill gesture reels of magnetic tape recordings of previous test telemetry—the Americans gave us information on their ground-launched missile, while we gave them information on our sea-launched missile. Once again, they sent us one spool, while we sent them several.

This is not a question of excessive generosity. It is simply that the Americans take the information on their missiles' behavior in flight from a single satellite, while our testers have to take the information from nine measuring stations sited along the country's northern seaboard. From Mirnyy to Kamchatka. There are stations in Naryan-Mar, Taymyr, Yakutsk, and even on Novaya Zemlya. The information is sent back by military couriers. This is when aircraft are flying and reindeer are not roaming the tundra. [sentence as published]

Because of this the countries set the timetable for the exchange of telemetry at 50 days. Less than that would be impossible. Otherwise there might be suspicions of dishonesty. It would then have to be proved that there was no way out from Novaya Zemlya. That would be no

justification in military-diplomatic circles—especially as delivery of magnetic tapes is subsequently provided for by diplomatic pouch.

But, so far, there is nothing to deliver. Apart from the so-called demonstration reels, the high contracting parties have not exchanged anything else. Our parliament—neither the old one nor the new one—has not ratified START II.

A whole telemetry exchange department has been set up at the Russian test range. Colonel Aleksandr Vasilyev, its deputy chief, agreed to be photographed alongside the U.S. equipment for this newspaper. He says that they are not wasting time but are preparing to do serious work on the transatlantic missile information. In principle they are already ready to do so.

So the ball is now in the State Duma's court.

180 Strategic Missiles Removed From Ukraine to Russia

*LD0405163394 Moscow ITAR-TASS in English
1550 GMT 4 May 94*

[By ITAR-TASS correspondent Anatoliy Yurkin]

[Text] Moscow May 4 TASS—Ukraine has removed to Russia 180 strategic nuclear missiles as of today, Igor Sergeyev, commander of the Russian strategic missile forces, said.

In an interview with ITAR-TASS on Wednesday, Sergeyev said that the missiles will be scrapped at Russian plants as envisaged by the agreements signed by Russia, Ukraine and the United States and START-I Strategic Arms Reduction Treaty.

Sergeyev recalled that under the Lisbon Protocol, Byelorussia [Belarus], Kazakhstan and Ukraine are also parties to the treaty which has been ratified by the U.S., Russia, Byelorussia, and Kazakhstan.

He stressed that Russia has already scrapped over 350 missiles and about 300 missile launchers. He added, however, that the implementation of the treaty depends not only on Russia, but also other ex-Soviet republics which possess nuclear weapons.

Russia has signed an agreement with Byelorussia to transfer a group of strategic missile troops in Byelorussia under Russia's control. Russia is also withdrawing strategic missile units from that republic.

A similar agreement was signed with Kazakhstan in March 1994. Both sides are now working on an agreement on the elimination of missile facilities.

Uncertainties Over N-Arms Close to Solution

*PM0305161594 Moscow IZVESTIYA in Russian
4 May 94 p 1*

[Article by Viktor Litovkin of IZVESTIYA: "Nuclear Alert Canceled. Warheads Being Removed in Ukraine and Kazakhstan"]

[Text] At long last the problem that perturbed the whole world after the disintegration of the Soviet Union and the emergence in its place of four states with over 350 strategic missiles with nuclear warheads on their territory is close to a solution. Ukraine, Kazakhstan, and Belorussia [Belarus] have begun to consistently fulfill their juridical commitments regarding nuclear disarmament.

"All 46 RS-24 heavy missiles stationed in Ukraine have been deactivated," Colonel General Igor Sergeyev, commander in chief of the Strategic Missile Forces, has declared. "Ukraine, and also Kazakhstan and Belorussia, the other CIS countries where our nuclear missile weapons are stationed for the moment, are honestly and consistently fulfilling their international commitments regarding nuclear disarmament."

He made this statement at a meeting with foreign countries' military attaches in Moscow. "The deactivation of missiles," the general explained to your IZVESTIYA correspondent, "means that their nuclear warheads have been removed and have been replaced by a special technical equivalent in order to ensure the normal, accident-free functioning of missile systems, while the missiles themselves no longer have targeting information [lisheny poletnykh zadaniy]. They no longer threaten anyone."

The commander in chief also disclosed that 20 missile complexes of the RS-18 liquid-fueled missile whose guaranteed operational lifetime had expired have been removed from alert status, the rocket fuel and oxidant have been pumped out of them, and the missiles have been readied for recycling [utilizatsiya]. Already 120 nuclear warheads have been withdrawn to Russia, and the rest will be dispatched to Russian plants in accordance with the Russian-Ukrainian timetable in conformity with the trilateral agreement concluded between Russia, Ukraine, and the United States in January of this year.

Operational control of the missile complexes in Ukraine is exercised from Moscow, administrative control from Kiev.

Agreement has also been reached with Kazakhstan on granting Russian status to the strategic missile units stationed on that sovereign state's territory. As IZVESTIYA has already noted, there are 104 RS-20 (SS-18 in the NATO classification) missiles with the biggest launch weight of 211 tonnes, with a throwweight of 8.8 tonnes, and with 10 nuclear warheads on each missile in the country. Now over a period of 14 months

these warheads will be removed from the missiles and withdrawn to Russian plants.

The recovery of missiles from silos and their dispatch for recycling will take much more time and effort, but are to be completed within three years. But Kazakhstan will become totally nuclear-free as early as 1995. (Forty Tu-95MS strategic bombers and 240 cruise missiles were withdrawn from its territory a few months ago.) Admittedly, questions of paying for the process of eliminating the nuclear-missile complex on the state's territory have still not been resolved, but, judging by the present state of intergovernmental relations between Moscow and Alma-Ata [Almaty], the funding of the work to destroy the missile silos will not cause great problems and disagreements.

There are no disagreements between Moscow and Minsk on the question of withdrawing strategic missiles from Belorussia's territory. The "Topol" missiles are leaving Lida and Mozyr on schedule, as IZVESTIYA reported in issue No 50 for 17 March.

Russia has now eliminated 302 launchers for its strategic missiles and 403 missiles, and a further 600 will have been destroyed by the year 2003. It is honestly fulfilling its commitments under the START I treaty and is laying the foundation for fulfilling the START II treaty.

According to the commander in chief of the Strategic Missile Forces, strategic nuclear weapon delivery vehicles are decreasing by one-third in our country and strategic missile warheads [golovnyye chasti] by a factor of more than six. By January 1996 the Strategic Missile Forces personnel will have been cut by 25,000 men and the central apparatus of the Main Staff and directorates will have been cut by 20 percent. Russia currently has 1,050 launchers, and by the end of the century there will be 800. Further reductions in strategic arms and their development now depend also on the other states in the "nuclear club."

Military experts and specialists in international relations familiar with the problem of the nuclear disarmament of Ukraine and Kazakhstan know that the process of reaching agreement here was by no means simple and straightforward. It took great efforts by the states' leaders, parliaments, and generals and, naturally, by the U.S. Administration, Britain, and France and a certain amount of political and economic pressure before the parties to the multilateral dialogue were able to reach agreement.

But the main thing has been achieved. The Treaty on the Nonproliferation of Nuclear Weapons, of which Russia and the United States are guarantors as countries keeping the treaty in their state archives, will not be violated. The world community has ensured that the nuclear club has not grown. And this means there is the hope that no other states possessing these terrible weapons of mass destruction will appear on the planet.

There is another conclusion that must be drawn from this fact: The world community, provided that there is consensus within it, is capable of solving many other problems of tricky relations between states and within them by peaceful means. All this takes is goodwill and awareness of its responsibility to the peoples.

Siberian Chemical Combine May Stop Production *LD2404065294*

Moscow Radio Rossii Network in Russian at 0400 GMT on 24 April carries a 2-minute report by Mayak correspondent Andrey Murashev from Tomsk region on the situation at the Siberian chemical combine, which "is fraught with catastrophic consequences."

He says: "This is how the staff of the enterprise has described the situation. In a letter addressed to Prime Minister Viktor Chernomyrdin and Atomic Energy Minister Viktor Mikhaylov, it has stated that work on a defense order and production of electric power and heat bring only losses to the enterprise. On 1 April, the debt for weapon-grade plutonium was 22 billion rubles, and for energy sources produced, 11 billion rubles. The enterprise developed a conversion program, which is being implemented at present and which includes, for example, the production of low-grade uranium for nuclear power engineering. But the payment for these orders will be made only at the end of the year."

Murashev says that due to the shortage of money, the combine cannot buy raw materials or pay wages to its staff, which demands that the Russian Government clear its debts and provide the long-promised credits. He points out that Russia's international commitments with regard to nuclear disarmament could be affected if the combine were to grind to a halt.

The correspondent went on to recall that the Siberian chemical combine was a major enterprise of nuclear production. "Two out of three nuclear reactors in the country that work for defense are situated here, in the closed town of Seversk, formerly known as Tomsk-7."

Commander Confirms 'Zero' Targeting of Redeployed Missiles

PM2104155594 Moscow IZVESTIYA in Russian
21 Apr 94 pp 1, 2

[Viktor Litovkin report: "Russia's Missile Guard Increased by Nine Topols"]

[Text] Yoshkar-Ola-Moscow—This was unprecedented. The until recently top secret strategic missile regiment belonging to the Kiev-Zhitomir Order of Kutuzov Missile Division deployed in Yoshkar-Ola inaugurated the performance of alert duty in the presence of Mariy-El Republic President Vladislav Zotin and before the gaze of television journalists, pressmen, and photographers, among whom were IZVESTIYA special correspondents.

The regiment comprises nine RS-12M Topol road-mobile delivery vehicles. Journalists were shown the holy of holies—the alert forces' fixed command post which controls the launch of missiles, the launch area equipment, its protection and defense system, and the guard quarters where the missilemen perform their alert duty—and had all the questions that interest us, including where the missiles are targeted, answered.

Before giving you that answer I would inform you that the regiment was assembled out of different pieces, as it were. Its officer backbone is made up of men who served in the missile unit belonging to the 43d Vinnitsa Army stationed in the settlement of Lebedin, Suma Oblast, Ukraine. The regiment was once equipped with SS-20 Pioneer intermediate-range missiles, which were destroyed some years ago under the Treaty on Intermediate-Range and Shorter-Range Missiles. The new equipment was received last August from the city of Postava, Belorussia [Belarus], from the Topol strategic missile division which was disbanded there and withdrawn from the republic's territory.

These systems replaced some of the RS-12 (SS-13 according to the U.S. classification system) fixed-site missiles with which the Yoshkar-Ola division is equipped. Officer retraining took six months, and they entered on alert duty on their new systems on 19 April.

It is also interesting that the regiment disbanded in Ukraine was created in Akhtyrka in 1655. It was the oldest military unit in Russia and had taken part in the Battle of Poltava. By edict of Empress Elizabeth the regiment was named the Akhtyrka Hussars. It was commanded at the battle of Borodino by General Denis Davydov, who took it as far as Paris. Lermontov and Alyabyev served there...

Now its colors and combat decorations, including the Orders of the Red Banner, Kutuzov, and Bogdan Khmelnistakiy are kept in the Central Museum of the Armed Forces.

The missile officers, I was told by assistant commander Lieutenant Colonel Vitaliy Lezhanin, have asked the Defense Ministry leadership to restore the memorabilia and the honorary title to them, but only time will tell whether the General Staff will heed them. In the opinion of those who perform alert duty today, they have every right.

Colonel Vladimir Kashkin, the commander of the regiment, told me that he doesn't know what his missiles are targeted on. Only the General Staff has such information. But division commander Major General Musa Tsogoyev clarified the position, stating that under the strategic missile agreement with the United States strategic missiles have "zero" targeting and that their mission will only be programmed at a time of threat. They maintain watch to deter any potential aggressor so that never comes to pass.

The missilemen's unprecedented openness in inviting journalists to see the regiment's entry on alert duty is, in my view, not just a desire on their part to report gradually on the execution of their international commitments. There is another reason for this too. As is well known, the former Russian Supreme Soviet did not ratify START, but the reequipping of the missile division in Yoshkar-Ola and the disbandment of strategic regiments in Belorussia and Ukraine constitute the implementation of that treaty.

Russia will keep its word, although the parliamentarians have not turned this word into law.

Academicians on Nuclear Waste Processing Technologies

LD2104202094 Moscow ITAR-TASS in English
1713 GMT 21 Apr 94

[By ITAR-TASS correspondent Anatoliy Yurkin]

[Text] Moscow April 21 TASS—Russia possesses unique technologies for comprehensive processing of combat toxic agents and nuclear waste, according to Professor Mikhail Sviderskiy.

Speaking at an international conference on chemical disarmament in Moscow on Thursday, Sviderskiy, who is a member of the Russian Engineering Academy, said that Russian scientists have developed and tested such technologies. They allowed them to make new materials with unique qualities which, according to specialists, will be widely used in the 21st century.

The new technologies also provide for processing used uranium into valuable materials. He said, however, that further research and experiments will require international participation. The United States, France, Britain and Germany could also benefit from the use of these technologies as they all face the same problem—utilisation of radioactive waste.

Academician Valentin Fedotov said that chemical disarmament must not only make up for the cost of manufactured toxic agents, but also augment state coffers. In his view, the processing of lewisite (liquid vesicant) into super pure arsenic may earn Russia billions of roubles and hard currency and provide the industry with high-quality materials.

Georgia, traditional supplier of arsenic, has stopped selling it to Russia which needs it for its electronics industry, Fedotov said. He noted that, the demand for super pure arsenic in the U.S. electronics industry will exceed 100 tonnes by the end of the century.

The academician stressed that new technologies meet Russia's national interests. "We must count only on ourselves and have no right to wait for someone else to solve our problems for us," he said.

No Funds Allocated for Radioactive Waste Storage

OW2104125794 Vladivostok Radiostantsiya Tikhyy Okean
Maritime Network in Russian 0715 GMT 20 Apr 94

[From the "Pacific Ocean" program]

[Text] The dumping of radioactive waste from Pacific Fleet submarines might be forced by the fact that there is nowhere to store the waste. Tankers with waste docked near the factory wharf of Zvezda in Bolshoy Kamen are filled to capacity, and can contain no more dangerous cargo. An ITAR-TASS correspondent was told this by Vladimir Ignatenko, representative of Russian president in the Maritime Kray. He said the government should have allocated funds to build a facility for processing the waste, but not a single ruble has been allocated for this purpose so far. Meanwhile, one of the tankers, which contains 794 tonnes of waste, is in a dilapidated condition. Either the factory has to be stopped so that the already critical mass of radioactive liquid will not increase, or else it has to be dumped at sea. However, this may take place only after coordinating it with the Russian president, said Vladimir Ignatenko.

General Says Strategic Missiles Kept in Case of Attack

LD2104124994 Moscow Radio Moscow World Service
in English 1100 GMT 21 Apr 94

[Text] The commander of the Strategic Forces Division, General (Mosad Sagoyev), says that Russia is loyal to its international obligations under the SALT II treaty [as heard]. A group of journalists was allowed to visit the division, that is deployed in the Volga region. They visited the headquarters and got acquainted with combat equipment of the division.

General (Sagoyev) reported that the SS-20 medium range missiles had been liquidated in keeping with the treaty. As for the strategic missiles, they are targeted nowhere. They will be assigned a special task, the commander said, only in case of an attack on Russia.

Petersburg Seminar on Monitoring Nuclear Materials Opens

PM2004115694 Moscow PRAVDA in Russian
19 Apr 94 p 1

[PRAVDA and ITAR-TASS column report under the rubric "In Brief"]

[Text] Experience in registering and monitoring nuclear materials was discussed at an international seminar which opened in St. Petersburg yesterday. Experts from Euratom [European Atomic Energy Community] and leading specialists from the Russian Federation Ministry of Atomic Energy and the Russian Federal Inspectorate for Nuclear and Radiation Safety are participating in it. The course of the implementation of national programs for improving systems of registering and monitoring nuclear materials is to be analyzed.

KAZAKHSTAN

Missiles Becoming 'Instruments of Political Blackmail'

PM2904085394 St. Petersburg Fifth Channel Television
Network in Russian 1800 GMT 20 Mar 94

[From the "Itogi" newscast: Video report from Kazakhstan by Aleksandr Gerasimov, identified by caption]

[Text] [Gerasimov over aerial view from helicopter] "Zone of consequences of the politics of the absurd"—this is probably the most apt description of the stationing locations of Strategic Missile Forces units in Kazakhstan. This is the fourth year since the disintegration of the Soviet Union, and the leaders of the nuclear republics have still not reached agreement on the division of nuclear weapons. These weapons, used as a deterrent until recently, are being turned into an instrument of political blackmail. Those who stand to lose from this are our own security, and the thousands of servicemen serving in the missile forces. [video shows aerial view from helicopter, truck-mounted missiles on the move, extensive closeups of missile silo interior, two servicemen in a missile control room, more closeups of missiles]

Formally, anything located on Kazakhstani territory belongs to Kazakhstan. At the same time, Alma-Ata [Almaty] has acceded to the offensive arms reduction treaty and does not regard itself as the owner of nuclear missiles. However, as a result of the cooling of relations between Kazakhstan and Russia, which followed the rejection of Nazarbayev's concept of the ruble zone, nobody is currently able to clearly define the nuclear weapons' status. [video shows more closeups of giant missiles]

[Gerasimov to camera and over video of missiles above ground] The nuclear weapons concerned are 104 of the world's most powerful strategic missiles—the SS-18—deployed in two divisions on the territory of Kazakhstan. The prevailing view is that these are Russian divisions. However, unlike in other armies, no state flag is flying above the headquarters. Admittedly, the main orders and the wages come from Moscow. Both the officers who have sworn allegiance to Russia, and the men who have taken the Kazakhstani oath and whose knowledge of Russian is poor, but who serve under Russian service regulations, are being paid in Russian rubles.

[Unidentified Russian officer addressing servicemen] No. 12 Platoon don gas masks! [video shows lineup of servicemen donning gas masks]

[Gerasimov over video of gas mask exercise] At the same time, Alma-Ata is also issuing menacing orders. Their implementation has resulted in the accumulation at nuclear bases of an impermissibly large number of warheads which have come to the end of their guaranteed service life.

[Akhmet Khashchegulgov, missile division commander, identified by caption] The accumulation of nuclear warheads in the missile division is in excess of the set norms. This is primarily the result of a decision by the leadership of the Republic of Kazakhstan banning the removal of nuclear warheads, missiles, missile fuel components, and other types of hardware from the territory of Kazakhstan.

[Gerasimov over more video of missile silo and control room scenes] According to our information from the Russian Government, the explanation for this stance adopted by Alma-Ata is President Nazarbayev's intention during his upcoming visit to Moscow to demand compensation for the highly enriched uranium contained in nuclear charges. In addition, strategic missiles offer a good bargaining chip in the political horse-trading between the two states whose relations are far from straightforward.

Officers here take the view that nuclear safety can be guaranteed only if their divisions are given the status of Russian military bases. For some reason, they believe here that this will be resolved during the upcoming meeting between Yeltsin and Nazarbayev.

Perhaps when this meeting has taken place, the local Kazakhstani authorities will stop cutting off the electricity and water supply to the military garrisons. In that case officers' children will no longer have to freeze in schools and kindergartens, and the officers on duty will no longer have to struggle to maintain the survivability of the nuclear missiles. Commanders will be able to find the money needed to repair heat supply networks, and the pipes for this work will no longer have to be flown in from Moscow. [video shows everyday life scenes, children]

To Senior Lieutenant Mikhail Kryukov and Major Vasiliy Salashnov, who are on alert duty deep down under ground, empty shelves in the garrison's stores are nothing new. Just like their comrades, they are constantly ready to implement orders. Nonetheless, most of the officers are dreaming about returning to Russia where conditions of service are more comfortable. Many of them remain in Kazakhstan only because of speedier promotion and because 12 months of service counts for 18 months here. [video shows more missile installations, store scenes]

Meanwhile, certain circumstances seem to indicate that Kazakhstan's leadership is not really seeking to improve relations with Russia. So for example, a strategic installation—a Kazakhstani air defense unit located near the missile division at Derzhavinsk—is completely snowed under. When the Kazakhstani air defense troops were still Soviet troops they protected the nuclear missiles from air attacks. Now the station is deserted.

A Kazakhstani-U.S. joint venture for extracting high-grade metals from missile silos which are being taken out of service is being set up in Alma-Ata. It appears that the Kazakhstanis trust Moscow less and less. The Russian

authorities, in turn, are taking no steps toward a rapprochement with Kazakhstan. [video shows extensive, detailed views of nuclear missile installations in Kazakhstan]

UKRAINE

Commentary Stresses Safe Operation of Nuclear Missile Site

AU2804104994 Kiev DEMOKRATYCHNA UKRAYINA in Ukrainian 26 Apr 94 pp 1,3

[Viktor Krokhamlyuk commentary: "Beware: Disinformation!"]

[Text] KOMSOMOLSKAYA PRAVDA published an article by its correspondent Olga Musafirova under the title "The Hero [Bohdan Khmelnytsky] With a Nuclear Mace: There Is No Strength To Hold It, and It Is Terrifying To Drop It.... Khmelnytsky Is Agitated by Rumors." Here is a quotation from that publication: At the site near Bohdanivtsi, 20 liquid-fuel SS-18 missiles seem to have been disabled and dismantled. There arose some problems with the storage of the "liquid," and heptyl, a poison of group "S" that is extremely toxic for all living organisms, is already poisoning the surrounding woods.

In this connection, a news conference was held at Ukraine's Security Service Administration in Khmelnytsky Oblast.

What actually happened? Missile specialist Ye. Arkhypov has this to say:

"Today, about 90 launchers have been taken off the alert—one regiment here and one—in Pervomaysk. The technology for pouring out the liquid fuel is such that no environmental damage may occur as a result. It is carried out by the method involving high pressure, and, therefore, not a single drop of heptyl may get either into the soil or onto the people servicing these operations."

Colonel Ye. Arkhypov also said that the system of control over the course of dangerous operations has a triple and, in some cases, fivefold guarantee. Work on servicing missile sites is conducted, as usual, according to plan and systematically, and specialists from all countries arrive there, so that it would hardly be possible to conceal any problems from them.

In the near future, Khmelnytsky missile specialists are expecting U.S. ecological safety inspectors; they will see what they themselves want to see and not what the Ukrainian side will recommend. Therefore, it is unlikely that our missile specialists may conceal anything even if they wanted to.

As emphasized at the news conference, nuclear fuel is too valuable a commodity to export or to sell at a very cheap price to CIS countries, in particular, to Russia, as some people are suggesting. The fuel remains on site, and then

some of it is sent to special arsenals for storage and some—for processing at chemical plants. Such a component of propellant fuel as the oxidizing agent is a very important product for manufacturing mineral fertilizers. Today, we must also think about Ukraine's space future.

Recently, an accord was signed with Kazakhstan on the joint use of Baykonur. We will be able to operate

Ukrainian missiles with our own fuel instead of paying thousands and millions of dollars for this.

I will add my personal remark: Even following the KOMSOMOLSKAYA PRAVDA material under the provocative title "Khmelnyskyy Is Agitated by Rumors," the situation in the town is calm, and I did not see any signs of fear, panic, or complaints against the missile specialists stationed here.

FRANCE

No Human Error Involved in Emeraude Submarine Accident*BR2904153894 Paris LIBERATION in French
28 Apr 94 p 34*

["D.Gd." report: "Military Report Describes Emeraude Accident"]

[Text] No human error and no nuclear contamination: Those are the main conclusions of the military commission of inquiry set up to look into the accident on board of the nuclear-powered attack submarine [SNA] Emeraude on 30 March, in which 10 crew members died. In a communique summarizing the report (150 pages sent to the public prosecutor in Marseilles), the Defense Ministry reconstructed the accident which occurred during maneuvers off Toulon. According to this version of events, the submarine was submerged at 190 meters. Between two training phases, the commander (who was among the victims) carried out a "section inspection" in the turbo-alternator compartment that "had been planned several weeks earlier to be done on that day."

At 10:35, 12 men were in the compartment when "a leak occurred in the sea water refrigeration collector." This leak was not, therefore, in the external hull but in an internal pipe. The "energy" officer left the compartment to return to the central navigation station, while emergency maneuvers were made to resurface the vessel in 100 seconds: Power was upped to increase speed, the sea water circuits were closed to prevent flooding, and the ballast tanks were emptied to accelerate resurfacing.

It was probably this combination of operations that led to "overpressure in one of the condensers," and then the "breaking of a clack plug, causing steam to pour into the compartment." Ten submariners were killed instantly by barotraumatism causing their eardrums and lungs to explode. One man managed to survive by taking refuge in the forward section of the compartment. The communique added: "The commission of inquiry found no evidence of human error attributable to the crew members at the time of the accident." Our sources tell us that a mechanic responsible for closing two outlets to stop the steam escaping when the ascent was started, only had time to close one of them before he was killed. The Defense Ministry authorized the six SNA's that had been recalled for checks to once again take to the sea, instructing the "immediate closure of the steam circuits in the event of a water leak." However, it would appear difficult to implement steam shutdown when a water leak appears, since it is necessary for rapid resurfacing.

Defense Continues Major Programs, New Ones Delayed*BR2104114794 Paris LE FIGARO in French 21 Apr 94 p 6*

[Patrice-Henry Desaubliaux report: "Armed Forces: 613.1 Billion Francs Over Six Years"]

[Excerpt] [passage omitted] The aim is for France (represented by a head of state and a prime minister who have not been elected on the same program and who do not refer to the same ideology) to maintain its world ranking as second largest Western military power. France wishes to maintain its autonomy of intervention wherever its interests are at stake. At the same time, it wishes to be the driving force in the building of a European defense.

Edouard Balladur and [Defense Minister] Francois Leontard are determined to carry through this programming law without waiting for [the presidential election in] 1995. Some people in the RPR [Rally for the Republic] and UDF [Union for French Democracy] had suggested to postpone the exercise until after the presidential election. The prime minister did not follow this expedient advice. Precisely because of the importance which he personally attaches to defense and security questions, it is he who decided on an increase of 0.5 percent, contrary to the aims of the law on controlling public spending.

The method adopted consisted of giving preference to what is reasonable over what is spectacular and adopting an attitude of great caution. It is in 1997 that we will see whether it is financially possible to launch several new programs like the future large transport plane, the second nuclear aircraft carrier, the NH-90 helicopter, the future sea-to-sea missile...

Between now and then, efforts will be made to successfully complete the major programs already started: the new generation of missile-launching nuclear submarines (Triomphant and Temeraire, due to come into service in 1996 and 1998); the Leclerc tank (310 will be supplied in the year 2000); the nuclear-powered aircraft carrier Charles de Gaulle; and the Navy's Rafale plane (operational in 1999); the Tigre helicopter (first deliveries in the year 2001); the Air Force Rafale from the year 2001-2002 (with a delay of one year mainly due to technological problems).

The only major program which will be launched as soon as the law comes into force is the development of the ATPGD (Precision Weapon Fired over a Long Distance) missile. What is it? Although the concept has virtually been defined, the program has not yet been finally decided. It will be a cruise missile of the Tomahawk type, in other words subsonic like the Apache, or supersonic like the medium-range air-to-surface missile, capable of covering between 500 and 1,000 km and reaching its target with an accuracy of approximately 1 meter. Its warhead would be exclusively conventional.

The austerity requirement called for a further reduction in the nuclear deterrence effort. Nuclear funds, which, less than 10 years ago, formed almost one-third of the Armed Forces' equipment budget, have already fallen below 25 percent and will fall further until they only account for one-fifth of Section V. In six years, 134 billion francs [Fr] will nonetheless be devoted to it, of which Fr10 billion will be just for the Palen simulation program intended to reduce the number of nuclear tests. These tests are not mentioned much in the bill. Everybody knows that the subject is taboo until the presidential election in May 1995, although all the necessary steps have been taken to resume them without delay.

With regard to manning levels, the draft programming law continues the reduction started over recent years, but with much less brutality. Leotard is not Joxe. The general staffs have been consulted, and fairly broadly heeded. In all, 42,100 jobs will be eliminated in six years, of which 25,700 will be conscripts, 12,800 civilians, and 3,600 regular soldiers. However, 11,700 new jobs will be created which results in a figure of 30,400 job losses.

The Army will lose 16,872 jobs; although it is to gain 5,801 in regular soldiers, it is to lose 19,185 conscripts and 3,500 civilians. In the year 2000, it will have 227,000 men (the Joxe plan made provision for 225,000 in 1997). It will keep eight out of the nine divisions it has now and the 13 it still had in 1990.

The Navy will lose 2,461 jobs: 2,161 conscripts and 500 civilians. It will gain 200 regular posts. In the year 2000, it will have 68,441 men (compared with 70,902 today).

The Air Force will lose 6,098 jobs: 1,628 will be regular Air Force personnel; 4,100 conscripts; and 370 civilians. In the year 2000, it will have fallen from 94,869 to 88,771 men.

The gendarmerie is the only branch of the Armed Forces to see its manning levels increase. It is to gain 750 men in its regular force, 1,000 conscripts, and 226 civilians. And it will thus become the second largest branch of the Armed Forces with 95,000 men (as against 93,024 in 1994).

The 11,700 jobs created will relate to intelligence (500 civilians), professionalization (8,200 of which 7,000 will be engaged by the Army), the gendarmerie (almost 2,000 posts created), officers (382 naval officers, 123 petty officers, and 500 armaments engineers).

This bill must now be submitted to the Assemblies. The deputies will debate it on 24 May and the senators in June. It is not customary for it to generate amendments. However, Edouard Balladur and Francois Leotard are prepared for a broad debate, even outside Parliament. They are fairly calm. They think it likely that criticisms will be expressed in the ranks of the majority. Some will think that too much is being spent on defense. Others will say that they would have liked a more generous law making it possible to launch new programs (for instance in the antimissile sphere) and at the same time to satisfy

all the industrial sectors of defense and to maintain their 330,000 jobs. But, when it comes to the vote, there should be broad agreement.

GERMANY

'Marked Increase' Noted in Smuggling of Nuclear Substances

AU2004114494 Berlin DIE WELT in German
20 Apr 94 p 2

[Report by Peter Scherer: "Illegal Dealing in Nuclear Material Soaring"]

[Text] Wiesbaden—The Hesse Office of Criminal Investigations (LKA) has reported a "marked increase" in illegal trafficking of radioactive material. The office said yesterday that three incidents of nuclear crimes were registered in 1991, while the number increased to nine in 1992, and rocketed to 30 in 1993. From January 1992 to the end of February 1993, almost 200 incidents from all over Germany were reported to the Federal Office for Criminal Investigations.

According to German security authorities, the nuclear crimes scene is dominated by Russians, Poles, and Czechs. The material comes from national installations in Eastern Europe and is smuggled to Germany from there, evading existing security systems.

Quite frequently, the hot material is smuggled to Germany via the Baltic states, Poland, and southeastern European countries. The LKA said that due to economic difficulties in the East, the FRG is "particularly attractive." Yet, the efforts of the nuclear dealers to make profitable deals in Germany usually fail because there is no illegal market for ultimate consumers of radioactive material—at least according to information available so far. Nevertheless, the LKA fears that radioactive substances will continue to be available in Germany.

According to information made available to DIE WELT, smugglers use military installations of Russian troops stationed in the former GDR as intermediate stores for substances like uranium-238. The material, of which 40 kilograms were recently offered in Germany's black market, is said to have come from Siberia on military transport aircraft. DIE WELT has a drawing of the special container in which the dealers are said to have taken uranium to customers in Hamburg.

The German mediator and transporter of the Russian-Polish nuclear cartel is an engineer from Saxony who claims to have access to the Russian uranium stockpile. The man also offers specially treated, and thus radioactive, mercury products for anti-radar coatings of items such as tanks or reconnaissance satellites, which makes them unrecognizable to radar imaging. Price per kilo: 50,000 marks. Photocopies of the Russian original certificates have also been made available to DIE WELT.

In 1993, the Hesse LKA carried out investigations on 92 suspects, 65 of whom were foreigners—mainly Eastern Europeans. In several cases indications of organized crime emerged during these investigations, the Hesse LKA said. Several uranium pellets and 500 grams of osmium-186 have been seized. There have been some cases of dealers offering nuclear substances fraudulently, the LKA said.

The Hesse investigators have also found that non-radioactive substances, such as scandium, europium, cobalt, osmium, and red mercury are "increasingly" appearing in the illegal markets. Police assure that so far no radioactive substances that are suitable for producing arms have been seized. Nevertheless, smuggling and dealing in nuclear material involves considerable danger, both for the smugglers and for the population, because improper handling of the material can cause most severe radiation damage.

TURKEY

Missiles To Be Bought From Russia as 'Deterrent Force'

NC0305185194 Istanbul SABAH in Turkish 29 Apr 94 p 12

[Report by Ugur Sefkat: "Turkey Will Buy Missiles From Russia"]

[Text] Turkey and the Russian Federation have moved to cooperate on defense. National Defense Minister Mehmet Golhan has revealed that Turkey will buy long-range missiles from the Russian Federation. He also said that he agreed with Defense Minister Pavel Grachev to help Turkey to acquire Russia's technology in ballistic missiles.

Golhan stressed that he held talks with Pavel Grachev, who is one of Russia's most influential officials, when he visited the Russian Federation some time ago. He asserted: "Defense Ministry officials in Russia informed me that they are prepared to sell various types of arms."

Golhan said that Turkey has moved to acquire missiles because Iran and Syria already have them in their military inventories. He asserted: "Russia has very advanced missiles. We will cooperate with it to help Turkey acquire its missile technology. We have particular problems with our neighbors from the point of view of missiles and nuclear weapons. Iran and Syria have long-range missiles. So Turkey must equip itself accordingly. Turkey has never been an aggressor country. It

does not intend to become one. We covet no country's territory. But we must maintain a deterrent force. Turkey is committed to the Treaty on Conventional Forces in Europe. We are not competing with our neighbors to acquire arms. But we do not want Turkey to be regarded as a weak country. A significant opportunity exists for cooperation with the Russian Federation to modernize the Turkish Armed Forces in every area."

Golhan stressed that Turkey has concluded a framework agreement with the Russian Federation for technical cooperation in defense. He said: "Everything has been included in that framework agreement. They agree to cooperate on issues relating to their missile technology. Experts from the two countries will work to realize their cooperation."

Iran, Iraq, and Syria have many Scud missiles. Iran has reportedly cooperated with the DPRK to increase the range of its missiles and improve its missile technology. According to U.S. intelligence reports, Iran has acquired technology on guided missiles. It is working to produce a missile with its own resources.

Iraq used Scud-B missiles during the Gulf war. But the technology that was used in the production of those missiles was old. Consequently they were not effective. The Scud-B missiles are 90 cm in diameter, weigh 6,300 kg, and have a range of 300 km. They may miss their targets by 600-800 meters. They may operate with solid or liquid fuel and deliver chemical or nuclear warheads. The Russian Federation has long-range missiles, which have been produced with modern technology.

Turkey signed the agreement known as the Missile Technology Control Regime in 1993. The United States, the Russian Federation, and many Western countries also signed that agreement, which bans the sale of missiles with a range of over 300 km and that can deliver warheads heavier than 500 kg. The agreement also limits the transfer of the technology required for the production of such missiles. Iran and Syria, which possess long-range missiles, have not signed that agreement.

The Russian Federation's SS-21 missiles are not included in that agreement. The SS-21 missiles, which were developed in 1976 to deliver conventional warheads, have a range of 120-200 km. They are launched from mobile launchers. Reportedly, the technology used in the production of the Scud missiles is 20 years older than the technology used in the production of the SS-21 missiles. The arming of the SS-21 missiles with warheads capable of causing mass destruction has been banned. Turkey has acquired military equipment and arms from Russia in the past.

Reporting on IAEA Observance of Yongbyon Fuel Rod Exchange

DPRK Inspection Proposal

*SK2104114394 Seoul YONHAP in English
1133 GMT 21 Apr 94*

[Text] Paris, April 21 (YONHAP)—North Korea sent a message to the International Atomic Energy Agency (IAEA) on Wednesday [20 April] proposing that IAEA inspectors witness the upcoming change of fuel bars at their 5-megawatt atomic reactor in Yonbyon.

The message said the fuel bars of the atomic reactor would be changed in a few weeks.

Sources in Vienna said the proposal was North Korea's first response toward the demand by the world community for additional international inspections of their nuclear facilities.

In the message, North Korea did not say whether they would accept additional inspections of six other nuclear facilities.

North Korea claims that the atomic reactor has been in operation since 1986 and that they never changed its fuel bars after 1989 when some fuel bars were changed due to a mechanical trouble, during which they said they extracted 90 grams of plutonium on an experimental basis.

A YONHAP report from Berlin said IAEA spokesman Hans Meyer confirmed that a contact of some sort was going on with North Korea.

He said that IAEA Director-General Hans Blix would decide whether to accept the North Korean proposal probably Thursday afternoon.

The IAEA had an emergency meeting Thursday morning to review the North Korean overture, the report said.

IAEA Studying Proposal

*SK2204012594 Seoul YONHAP in English
0113 GMT 22 Apr 94*

[Text] Seoul, April 22 (YONHAP)—The International Atomic Energy Agency [IAEA] was studying Friday the meaning of North Korea's request for IAEA inspectors to be "present" when nuclear fuel rods are changed at its five-megawatt reactor.

The IAEA specifically wants to find out whether "presence" means simple "observation" or activity that would allow the collection of samples, a senior South Korean Government official said.

The IAEA will not accept the North Korean proposal if it just involves observation or limited participation.

In their negotiations in Vienna, the IAEA is demanding that its inspectors be allowed to collect samples of the waste material produced during the changing of nuclear fuel rods, the official said.

If the IAEA could collect samples of such waste material, it would be able to estimate how much plutonium North Korea had extracted since the five-megawatt reactor went into operation in 1986.

"The IAEA is in contact with North Korea in order to find out the exact definition of the word 'presence' of IAEA inspectors," the official said, adding that the nuclear watchdog is expected to make a decision soon on Pyongyang's proposal after analyzing its political and technical intentions.

North Korea has not made its position clear on additional IAEA inspections of its nuclear facilities, requested by the UN Security Council president's statement.

The official also denied press reports that North Korea had offered conditions to the United States on further IAEA checks.

IAEA Inspectors To Be Sent

*SK2204014994 Seoul YONHAP in English
0140 GMT 22 Apr 94*

[Text] Seoul, April 22 (YONHAP)—The International Atomic Energy Agency (IAEA) has officially informed North Korea that its inspectors will be present when nuclear fuel rods are changed at the 5-megawatt reactor in Yongbyon, as proposed by Pyongyang.

One senior South Korean Government official said, "the IAEA has made a decision to accept the North Korean proposal and conveyed its intention to send its inspectors to North Korea so that they can be present for the changing of nuclear fuel rods at the 5-megawatt reactor."

As a result, IAEA inspectors could arrive in North Korea sometime next week as the nuclear fuel rods will likely be replaced in early or mid-May.

The UN Security Council, in a statement by its president, urged North Korea to accept additional IAEA inspections before the middle of next month.

"The IAEA has told North Korea to ensure safety measures needed by IAEA experts during the nuclear fuel rod changing," the official said, indicating that the agency and Pyongyang are still negotiating follow-up measures to the rod replacement and problems related to further checks.

In particular, the IAEA is said to be stressing the need for additional inspections of the 5-megawatt reactor and a radiochemical laboratory, which Pyongyang refused to allow last time, he said.

Lab Inspection 'Absurd Demand'*SK2204011994 Seoul YONHAP in English
0107 GMT 22 Apr 94*

[Text] Washington, April 22 (YONHAP)—Pyongyang cannot accept an International Atomic Energy Agency (IAEA) proposal for inspection of its radiochemical laboratory, a senior North Korean official said Thursday.

Kim Chong-su, deputy chief of the North Korean mission to the United Nations, said Pyongyang is willing to allow IAEA inspectors to witness the changing of fuel rods at the Yongbyon nuclear reactor, but that it cannot accept additional checks of the radiochemical laboratory.

He said, "We have allowed every inspection to ensure the continuity of nuclear safeguards. We have shown everything to the IAEA, and the proposal for additional inspection of the laboratory is an absurd demand."

North Korea sent a message to the agency Wednesday proposing that IAEA inspectors witness the upcoming changing of fuel rods at the country's five-megawatt nuclear reactor at Yongbyon.

IAEA Denies Inspectors To Be Sent*SK2304233394 Seoul KBS-1 Radio Network in Korean
2300 GMT 23 April 94*

[REUTER/YONHAP from Vienna]

[Text] REUTER news agency has reported that it is unlikely that an International Atomic Energy Agency [IAEA] inspection team will soon enter North Korea to witness the changing of fuel rods at North Korea's nuclear reactor in Yongbyon.

Denying ROK media reports that an advance team would leave for North Korea over the weekend, spokesman Kyd said those reports are groundless. Spokesman Kyd admitted that the advance team did prepare to leave for North Korea. However, since North Korea has not responded to a list of IAEA inspections so far, chances are slim that the team would arrive in North Korea by 28 April, he added.

IAEA Team To Get 'Everything Needed'*SK2704003194 Seoul KBS-1 Radio Network in Korean
0003 GMT 27 Apr 94*

["ITAR-TASS and YONHAP from Moscow"]

[Text] North Korean Ambassador to Russia Son Song-pil said yesterday that the International Atomic Energy Agency [IAEA] delegation that will visit North Korea to observe the replacement of fuel rods will be provided with everything needed for its normal [chongsangjogin] activities within the scope of agreements.

In an interview with ITAR-TASS on 26 April, Ambassador Son Song-pil said the above, stressing that North Korea's decision to allow the IAEA to observe the replacing of fuel rods at the reactor in Yongbyon shows the North Korean will to display the peaceful nature of its research in this field.

Fuel Rod Replacement To Begin 'Soon'*SK2704110194 Pyongyang KCNA in English
1051 GMT 27 Apr 94*

["Fuel Rod of Experimental Nuclear Power Station To Be Replaced in DPRK"—KCNA headline]

[Text] Pyongyang, April 27 (KCNA)—According to a spokesman for the Foreign Ministry of the Democratic People's Republic of Korea, the DPRK will soon begin the replacement of the fuel rod according to the operation plan of the 5 megawatt experimental nuclear power station for the present as part of the undertakings for the normalization of our peaceful nuclear activities.

Answering a question put by KCNA today, the spokesman said:

Consistent is our stand to show the honesty of our nuclear activities, although the replacement of the fuel rod is being made while we are still in a unique status following the temporary suspension of the effectuation of our declared withdrawal from the Nuclear Nonproliferation Treaty.

Hence, we decided to voluntarily notify the International Atomic Energy Agency of our plan for the replacement of fuel rod and, especially, to allow inspectors of the IAEA to observe the process of replacement of the fuel rod so that they may verify that nuclear materials are not diverted to non-peaceful purposes, and promptly issued entry visas to the inspectors as requested by the agency.

If inspection activities falling within the scope of routine and ad hoc inspections are raised in the course of the replacement of the fuel rod, they may be allowed after the nuclear issue is settled in a package deal at future DPRK-U.S. talks.

We will leave the fuel rod to be replaced this time strictly under the containment and surveillance of the IAEA and fully provide the continuity of safeguards data.

We are studying the problem of "additional inspection" of the radiochemical laboratory raised during the March inspection activities of the IAEA in close relations with the attitude of the United States and the IAEA Secretariat.

Hence, we have already notified them that we are willing to allow an "additional inspection" as an exception after examining their future behavior in keeping with the change of the current situation surrounding the exchange of special envoys between the North and South.

If the United States and the IAEA Secretariat, ignoring our good will, rudely demand sampling and other inspection activities in disregard of our unique status at the time of the replacement of the fuel rod, we will have to regard it as a sinister political intention to continue more openly the campaign for stifling the DPRK over its peaceful nuclear activities.

When an irrevocable complex situation is created by that, we cannot hold ourselves responsible for it at all.

If the United States and the IAEA Secretariat respect our unique status and take a fair attitude and position, looking straight at the current situation, another opportunity of finding a fundamental solution to the nuclear issue will be created.

Inspection Contingent on Conditions

SK2904105694 Seoul YONHAP in English
1042 GMT 29 Apr 94

[Text] Seoul, April 29 (YONHAP)—The International Atomic Energy Agency (IAEA) informed North Korea on 27 April that it would send inspectors to Pyongyang to witness the change of fuel bars at a 5-megawatt atomic reactor in Yongbyon on the condition that the two sides discuss the issue of taking sample materials on used fuel later, a diplomatic source here in Seoul said on Friday.

The source said that IAEA plans to send five inspectors to North Korea and asked Pyongyang to issue visas to three inspectors in addition to the two who had already obtained visas.

If things go on smoothly, the five IAEA inspectors would leave Vienna where the IAEA Secretariat is located on April 30 and fly into Pyongyang via Beijing on May 2 or 3.

"IAEA's position is that sample of after-use fuel should be taken without fail at the time of the change of fuel bars," the source said.

"I understand that IAEA chose to send inspectors on the condition of the later discussion of sample taking inasmuch as the deadline for fuel rod change is imminent."

The five IAEA inspectors will not only witness the change of fuel bars but will also conduct routine checks such as the change of films and battery of surveillance camera, the source said.

A North Korean Foreign Ministry spokesman said on April 27 they would accept seven items out of the eight-point inspection demanded by IAEA with the sole exception of sample taking.

Besides, North Korea expressed the willingness to place after-use fuel rods under IAEA surveillance until sample is taken under an agreement they would reach with IAEA.

Inspection Demands 'Inappropriate'

OW2704055894 Tokyo KYODO in English
0416 GMT 27 Apr 94

[Text] Seoul, April 27 KYODO—North Korea has rejected a request from the International Atomic Energy Agency (IAEA) to sample and analyze fuel at a key nuclear facility, a South Korean daily reported Wednesday [27 April].

Pyongyang told the IAEA Monday that the IAEA's request to inspect a 5,000-kilowatt nuclear reactor in Yongbyon, some 90 kilometers north of Pyongyang, is inappropriate, the TONG-A ILBO said.

The IAEA is insisting that North Korea allow a full check of North Korea's nuclear stockpiles, in addition to monitoring replacement of fuel rods at the nuclear plant.

In a front-page story dispatched from Vienna, the daily quoted North Korean diplomat Yun Ho-chin as saying that he notified the IAEA it would not be granted permission to conduct eight tests when the fuel rods are exchanged at the nuclear reactor.

The IAEA says the inspections would reveal the current level of North Korea's nuclear program and how much plutonium has already been recovered from the spent nuclear fuel.

Yun, a counselor at the North Korean Embassy in Austria, said the IAEA can ensure that nuclear materials are not being diverted to military purposes when it observes the removal of the reactor core, according to the report.

North Korea has nothing more to say to the IAEA, Yun was quoted saying.

The Yongbyon reactor was started up in 1986. Its fuel rods are almost exhausted and are due for replacement. The reactor was previously shut down for 100 days in 1989 for unknown reasons.

The nuclear complex at Yongbyon has been the focus of Western allegations that North Korea is engaged in a covert nuclear arms development program.

IAEA Cancels Inspection

SK2904232994 Seoul KBS-1 Radio Network in Korean
2207 GMT 29 Apr 94

[By Cha Man-sun from Vienna]

[Text] North Korea rejected the International Atomic Energy Agency's [IAEA] new proposal that the IAEA conduct gamma mapping and analysis on used nuclear fuel later. Accordingly, the IAEA has canceled the plan to send five inspectors to North Korea.

IAEA spokesman Hans Meyer said: North Korea sent a reply to the IAEA's new proposal on 29 April, and an analysis of the reply message by IAEA high-level policy

makers has come to the conclusion that it is unsatisfactory [manjoksurophi motan kosuro kyollonul naeryoddago].

He stressed: The IAEA has canceled the planned visit to North Korea by the five inspectors, who were supposed to leave for the country today (30 April), since North Korea notified that it cannot meet the IAEA's demand that North Korea allow the inspection team to conduct necessary inspection activities when fuel rods are changed.

Hans Meyer also said that the IAEA plans to discuss the change of fuel rods with North Korea again early next week.

IAEA Renews Inspection Demand

OW0205142894 Tokyo KYODO in English
1415 GMT 2 May 94

[Text] Vienna, May 2 KYODO—The International Atomic Energy Agency (IAEA) has renewed its demand that North Korea allow it to conduct full inspections at the time of refueling at an experimental reactor in Yongbyon, an IAEA spokesman said Monday (2 May).

The spokesman said the Vienna-based nuclear watchdog body made the demand in a letter sent to North Korea on Sunday.

The IAEA wants to send an inspection team to North Korea to oversee the refueling which involves the replacement of fuel rods at the 5-megawatt reactor in Yongbyon, 90 kilometers north of Pyongyang.

The Yongbyon complex has been the focus of allegations that North Korea is pursuing a clandestine nuclear weapons program.

North Korea on April 29 offered to allow IAEA inspectors to be present at the unloading of spent fuel rods from the reactor, but said it would not permit the IAEA to measure radioactivity levels or take samples.

The IAEA later indicated that North Korea's terms were unacceptable.

North Korea had indicated it would like to conduct the refueling as early as late April.

The latest IAEA message to North Korea indicates that the agency has not budged from the insistence that it wants full inspections of the facility and that it will consider a failure to allow this as an infringement of the Nuclear Nonproliferation Treaty.

U.S. Defense Secretary William Perry said in Seoul on April 21 that North Korea will be able to acquire enough plutonium "within weeks" to make four to five nuclear bombs with the fuel rod change at the reactor.

Dialogue on Inspections To Continue

SK0205081194 Seoul KBS-1 Radio Network in Korean
0515 GMT 2 May 94

[Report by Cha Man-sun from Vienna]

[Text] Although North Korea has rejected essential inspection activities during its replacement of nuclear fuel rods, the International Atomic Energy Agency [IAEA] has assumed a position of immediately dispatching an inspection team to North Korea and not discarding dialogue with the DPRK in expectation of a change in the North's basic position through contact with the United States.

The IAEA is hoping that North Korea, in the face of the report to be presented by IAEA Director-General Hans Blix at the UN Security Council in mid-May, will show a positive response through contact with the United States and that dialogue with North Korea will be maintained. The IAEA is also keeping the five-member inspection team, who have already obtained entry visas to North Korea, on standby.

It is a basic position of the IAEA that it determines if North Korea converted used nuclear material through inspection activities during North Korea's replacement of nuclear fuel rods, and to provide a perfect surveillance system to prevent North Korea from converting used nuclear material in the future.

North Korea rejected IAEA's essential inspection activities through which IAEA can verify if used nuclear material was converted and revealed its intention to use this issue as a negotiating card during contact with the United States to gain support for its light-water reactor.

Apart from such moves by North Korea, North Korea linked the nuclear issue with the third round of U.S.-North Korean high-level talks during the recent working-level contact with the United States. Thus, it is likely that in the event the North Korean demand is accepted during the upcoming U.S.-North Korean contact in New York, North Korea will accept the IAEA demand for substantive inspection activities.

Foreign Ministry Spokesman on Inspections

SK0305141394 Pyongyang Korean Central
Broadcasting Network in Korean 1300 GMT 3 May 94

[Text] In response to a question from a Korean Central News Agency reporter regarding the replacement of fuel rods at the five-megawatt experimental nuclear power station, a spokesman for the DPRK Foreign Ministry today gave the following answer:

In connection with the replacement of fuel rods at the five-megawatt experimental nuclear power station, we and the International Atomic Energy Agency [IAEA] Secretariat recently exchanged many telex messages. Under our special position [tuksuhan chiji] in which we

temporarily suspended the effectuation of the withdrawal from the Nuclear Nonproliferation Treaty [NPT], out of a consistent position to show the irreproachability [kyolbacksong] of our nuclear activities, we decided to subject the upcoming replacement of fuel rods to the thorough surveillance of the agency. Therefore, we decided to allow agency inspectors to observe [iphoe] the replacement of fuel rods to verify that the nuclear material is not diverted for other, nonpeaceful purposes [tarun pipyonghwajok mokchoe yuyong].

The agency's observance activities, which we decided to allow, include the observance [kwanchuk] of the replacement of fuel rods, containment and surveillance [pongswaewa kamsi] of all replaced fuels, and all other contents of inspection sufficient enough to ensure the continuity of safeguards [tamboui yonsoksongul pojanghanunde chungbunhan sachal naeyongduri]. We also immediately issued visas for the five inspectors, which the agency requested. As shown, we made all possible efforts to prove the transparency [tummyongsong] of our nuclear activities even though we are under a special position.

Nevertheless, the IAEA Secretariat is now making an unreasonable request [pudanghan yongu] to select, preserve, and measure [sontack pogwanhago chukchong] some fuel rods during the fuel rod replacement.

They say that they would select and measure fuel rods. This is tantamount to an attempt to conduct regular and irregular inspections [chonggi mit pijonggi sachal] in disregard to our special position in which we temporarily suspended the withdrawal from the NPT. This can in no way be allowed [tojohui hoyongdoelsu opta].

The only inspection activity that we can allow as a voluntary goodwill measure at present is an inspection purely to ensure the continuity of safeguards to prove that the nuclear material is not diverted for other purposes in compliance with our special position [hyondangyeeso uriga chawonjogin sonuiui chochiro hoyonghaejulsu innun sachal hwaltongun uriui tuku chiwie matke haengmunchiri tarunmochoge yuyongdoejiannundanungosul hwaginhanun sunsu tamboui yonsoksong pojangul wihan sachal ppunida].

Allowing the agency to subject all replaced fuel rods to its containment and surveillance and to verify that they are not diverted for other purposes is the expression of our greatest goodwill [uriui choedaewi sonuiui pyosi].

The IAEA Secretariat, however, is insisting on unfair demands, while openly ignoring our special position. This is clear proof that the IAEA Secretariat is still treating us with prejudice, while using suspicions of us as an excuse and that the IAEA's partiality keeps expanding.

The IAEA Secretariat, which has in the past fabricated inconsistencies by eliminating [word indistinct] samples, this time wants to measure selected parts of the fuel rods.

This proves that it intends to continue to cling to the anti-Republic pressure commotion by eventually making new inconsistencies.

What cannot be overlooked is that the IAEA Secretariat is still not sending an inspection team, even though we have this time allowed inspections to ensure the continuity of safeguards and the so-called unfinished inspections, which was raised in the last inspection conducted in March.

This clearly shows that the IAEA Secretariat has been pursuing insidious political objectives by raising our nuclear issue at the IAEA Board of Governors meeting and the UN Security Council. If we allow the measurement of selected parts of the fuel rods under such circumstances, the IAEA Secretariat is sure to fabricate a new pretext in the anti-Republic pressure commotion. We can no longer let the IAEA Secretariat use our nuclear issue in the political game.

In case the IAEA Secretariat does not accept our reasonable proposal and insists on its unfair demands to the end, we cannot but replace the fuel rods in accordance with our operation plan.

In technical and security aspects, the replacement of the fuel rods is an urgent matter that cannot be delayed any more. Whether the IAEA inspectors are there to observe or not, the spent fuel counter, thermal luminescence detectors, and surveillance equipment installed by the IAEA in the experimental nuclear power plant are still operational, therefore, our fuel rod replacement work will be under thorough IAEA surveillance.

We will place all replaced fuel from the fuel rods under IAEA control and will allow examination when the nuclear issue is resolved in a package deal in future DPRK-U.S. talks.

In the event the IAEA Secretariat drives the situation to extremes, despite our maximum generosity and good intentions, correspondingly, we will resolutely counter this [urinun undang kue tanhoi taechohae nagal kosida].

With the resolution of the nuclear issue now reaching a gateway stage [kwanmunjok taemok], the IAEA Secretariat should think more deeply.

IAEA Sends New Inspections Letter

SK0305002694 Seoul YONHAP in English
0013 GMT 3 May 94

[Text] Berlin, May 2 (YONHAP)—The International Atomic Energy Agency [IAEA] sent another letter to North Korea Monday urging the communist state to let IAEA experts undertake inspections when it changes fuel rods at the 5-megawatt reactor in Yongbyon, sources close to the agency said. Such inspections are necessary under the nuclear safeguards agreement, the IAEA has reportedly pointed out.

The agency sent a second letter after determining that North Korea's reply on 29 April to its first letter was unsatisfactory. Monday's letter was sent to ascertain North Korea's true intentions, the sources said Tuesday.

In its reply, Pyongyang told the nuclear watchdog that the fuel rods at the 5-megawatt reactor must be changed soon and requested an early dispatch of IAEA inspectors. It made no commitment, however, on IAEA requests laid down as conditions for the presence of its inspectors at the refueling. North Korea only agreed to allow the inspectors to be present when it removes spent fuel rods from the reactor.

It gave no clear reply to "the IAEA's flexible technical and compromising plans" on taking samples in order to determine the extent of plutonium extraction and the reactor's operating condition.

The IAEA, in its initial letter sent early last week, told North Korea it was willing to compromise and take random samples of the spent rods, seal them and analyze them later.

Although the North Koreans themselves suggested that the IAEA be present during the refueling of the five-megawatt reactor, they have failed to make an offer that would allow satisfactory inspection activities, the sources said. As a result, the IAEA sent the second letter seeking to confirm North Korea's exact intentions, they added.

IAEA Sends 'Urgent' Telegram

SK0405235794 Seoul KBS-1 Radio Network in Korean
2300 GMT 4 May 94

[Cha Man-sun Reports from Vienna]

[Text] On 3 May, Hans Blix, secretary general of the International Atomic Energy Agency [IAEA], sent an urgent telegram to North Korean Foreign Minister Kim Yong-nam in an attempt to make a breakthrough in the issue of witnessing the changing of fuel rods at North Korea's nuclear reactor in Yonbyon.

In the telegram, he emphasized that the IAEA would send its inspectors if North Korea accepts the demands set forth by the IAEA, and pointed out that the changing of nuclear fuel rods without witnesses may lead to a serious situation under which the transparency of North Korea's nuclear development cannot be guaranteed.

It was reported that Secretary General Hans Blix may have stressed that the IAEA would be compelled to report to the UN Security Council of its inability to confirm whether nuclear materials are being diverted in the event that the nuclear fuel rods are changed without the presence of inspectors.

Considering that all previous communications have been made through a working-level channel, the IAEA secretary general's urgent telegram is taken to be a very unusual step that hints of an acute situation and that can

be interpreted as an ultimatum regarding the changing of nuclear fuel rods. This step was taken as the situation turned more serious as North Korea recently reiterated its position to go ahead with the changing of its nuclear fuel rods in a statement released by the North Korean Foreign Ministry.

IAEA Team To Inspect 'This Weekend'

SK0305053994 Seoul KBS-1 Radio Network in Korean
0430 GMT 3 May 94

[Text] It has been learned that the visit to North Korea by an inspection team will be realized around this weekend at the earliest as North Korea and the International Atomic Energy Agency [IAEA] have narrowed their opinions as to the issues of additional inspections and the witnessing of the change of nuclear fuel rods.

Today, one diplomatic source in Seoul said: As letters have been exchanged between North Korea and the IAEA, the differences of opinion between the two sides have now nearly been settled. The IAEA says it will begin inspections of whatever is settled first, either the additional inspections or the witnessing of the change of nuclear fuel rods. It is believed that the IAEA will conduct other inspections when it visits North Korea.

Sample-Taking Rejected, Inspectors Not Sent

SK0405034294 Seoul KBS-1 Radio Network in Korean
0310 GMT 4 May 94

[AFP, YONHAP from Vienna]

[Text] The International Atomic Energy Agency [IAEA] on 4 May disclosed that North Korea has reaffirmed its stance of not allowing collection of samples when the fuel rods at North Korea's nuclear reactor in Yonbyon are replaced.

IAEA Spokesman Hans Meyer said that the IAEA will not send for the time being its inspectors to North Korea since the latest response from the North Korean Government falls short of expectations.

UN Action Against DPRK Favored

SK0705033894 Seoul YONHAP in English
0325 GMT 7 May 94

[Text] Seoul, May 7 (YONHAP)—The South Korean Government decided Saturday [7 May] that additional action by the UN Security Council against North Korea is unavoidable if Pyongyang does not accept by next week an IAEA (International Atomic Energy Agency) presence during the changing of fuel rods at the 5-megawatt reactor in Yonbyon.

The decision was made at a Unification and National Security Policy Coordination meeting presided over by new Deputy Premier and National Unification Minister Yi Hong-ku.

"Our government position is that if North Korea presses ahead with changing the fuel rods by themselves, it would be unavoidable to take additional steps against the North," Yi said.

Emerging from the meeting, the deputy premier said North Korea has thus far maintained that it cannot allow the collection of samples from the reactor's spent fuel rods.

The meeting also decided to step up the existing system of cooperation with the United States, the United Nations and the IAEA with respect to the nuclear question.

As to when any additional action might come, Yi said not much time is left.

"The recent UN Security Council presidential statement has set mid-May as the deadline for North Korea's acceptance of additional IAEA inspections," he said.

Noting that the North Koreans' attitude remained somewhat ambiguous, the deputy premier said their position would become clear either this weekend or early next week.

Yi added, however, that if North Korea expressly promises to allow IAEA sampling of fuel rods at the 5-megawatt reactor, it could be taken as a sign of progress.

It is still unclear, he said, whether North Korea has begun to change the fuel rods on its own.

North Korean Foreign Minister Kim Yong-nam, in a message to the IAEA, said Friday his country could allow additional inspections of its nuclear facilities, including taking samples from a glove box at the key radiochemical laboratory in Yongbyon.

But Kim said he could not promise permission to collect samples from the fuel rods at the 5-megawatt atomic reactor, a source said.

PRC, Japan Sign Accord on Nuclear Safety

*OW0305100194 Beijing XINHUA in English
0853 GMT 3 May 94*

[Text] Beijing, May 3 (XINHUA)—China and Japan signed a "cooperation arrangement on nuclear safety" here today, making Japan China's seventh partner in the endeavor for nuclear safety following the United States, France, Germany and some other industrialized countries.

The agreement was signed by Huang Qitao, vice-minister of China's State Science and Technology Commission and director general of the National Nuclear Safety Administration (NNSA), and Youki Kawata, director general of the Agency of Natural Resources and Energy under the Japanese Ministry of International Trade and Industry.

Under the agreement, the two contracting parties will strengthen cooperation on the safety administration of commercial nuclear power plants in the two countries, exchange information and experts so as to ensure nuclear safety.

In a meeting with Kawata prior to the signing ceremony, Huang said that the agreement will usher in a new period for Sino-Japanese cooperation in nuclear safety.

Kawata expressed the conviction that more effective cooperation in nuclear safety will help boost the overall Japan-China cooperation.

A month ago, the NNSA, a government organ independently exercising administration over nuclear safety in China, concluded a cooperation agreement for nuclear safety with the Nuclear Safety Bureau of Japan's Science and Technology Agency.

YONHAP Reports DPRK-U.S. Working Level Contact

*SK2904030894 Seoul YONHAP in English
0300 GMT 29 Apr 94*

[Text] New York, April 28 (YONHAP)—North Korea and the United States met behind closed doors Thursday [28 April] to discuss a diplomatic solution to the dispute over Pyongyang's nuclear program, sources here said.

Washington expressed its willingness to hold a third round of high-level talks with Pyongyang as well as suspend "Team Spirit," the annual joint South Korean-U.S. military exercise, if North Korea permits additional outside nuclear inspections and agrees to resume inter-Korean dialogue.

The United States said North Korea should allow the International Atomic Energy Agency [IAEA] to observe the refueling of the 5-megawatt reactor at Yongbyon and satisfy the IAEA's calls for collection of samples and other technical work, informed sources said.

The State Department announced that at the working-level contact Thursday, the U.S. side conveyed a letter from Robert Gallucci, assistant secretary for political and military affairs, in response to a written message from Kang Sok-chu, North Korea's first vice foreign minister.

The State Department said it expects that North Korea will answer the letter soon.

Gallucci reportedly said in the message the United States will hold further high-level talks and suspend Team Spirit if North Korea maintains the continuity of nuclear safeguards by allowing additional inspections, the sources said.

North Korea did not present any new proposals, instead just listening to the U.S. position, but will likely disclose its stance at the next contact expected early next week, sources said.

The meeting was made at the request of the U.S. side.

The State Department's North Korea desk officer, C. Kenneth Quinones, led the Americans while the counselor at the North Korean mission to the United Nations, Han Song-yol, headed the other side.

The two nations agreed at their 25 February contact that North Korea would accept IAEA inspections of seven declared nuclear sites, that they would hold a third round of high-level talks, that Team Spirit would be suspended this year, and that South and North Korea would exchange special envoys.

But North Korea refused to exchange special envoys and did not accept IAEA checks of a radiochemical laboratory, in effect breaking the agreement.

Rio Group, EU Ministers Call for Total Nuclear Test Ban

*PY2304023094 Madrid EFE in Spanish
2320 GMT 22 Apr 94*

[Text] Sao Paulo, 22 Apr (EFE)—In a final declaration issued at the end of the fourth meeting of foreign ministers, the Rio Group and the EU today agreed to call for a total ban on nuclear tests in the world and condemned every form of terrorism.

Regarding their commitment to disarmament and to nonproliferation of weapons of mass destruction, the participants of the fourth Rio Group-EU ministerial meeting expressed their complete agreement in condemning every form of nuclear testing.

The Sao Paulo Declaration, which was approved by 13 foreign ministers of the Rio Group and representatives of the EU member countries, states: "The ministers (of the Rio Group and the EU) agree on proposing the signing of a multilateral treaty that would impose a total ban on nuclear tests and would be fully verifiable."

In the Sao Paulo Declaration, the Rio Group and the EU also expressed their total condemnation of terrorism.

The declaration states: "The ministers...condemn without reservations—as an unjustifiable crime—every act of terrorism, irrespective of who perpetrates them, where, or why, because acts of terrorism endanger and claim the lives of human beings. They also undermine human dignity and are a threat to democracy and to a state of law."

The ministerial meeting between the Rio Group and the EU is the fourth since bilateral talks were institutionalized by the Rome Declaration (1990). The meeting, which is being held at the Latin American Parliament (Parlatino) building in the city of Sao Paulo, is scheduled to close on 23 April but the final declaration was released today.

In addition to condemning nuclear tests, the Rio Group-EU ministers praised the "recent progress made in

consolidating the regime for a total ban on nuclear weapons in Latin America and the Caribbean as established in the Tlatelolco Treaty."

The declaration also expressed support for the Convention Banning the Development, Production, Storage, and Use of Chemical Weapons and Their Destruction, and revealed their resolve to adopt specific measures to fully implement the Convention on Biological Weapons.

The Rio Group and the EU also voiced their desire to cooperate to give openness to international arms trade.

The latter point was specifically requested by Andean countries like Colombia, which has been affected by arms trafficking financed by narcotrafficking and terrorist organizations.

The two blocs' representatives agreed to promote a UN Registry of Conventional Weapons with a view to effectively controlling arms possession around the world.

In the Sao Paulo Declaration, which consists of 19 points focusing on economic and political issues, the Rio Group and the EU reaffirm their respect for democracy and the principles of free trade.

The Rio Group and the EU also have agreed to define a new model of bilateral relations in which the Latin American countries would have greater participation in various international issues such as world security and the reform of the UN Charter.

The Latin American countries also expressed their concern about the social, environmental, and labor conditions some European nations are starting to impose on their trade with developing countries.

The continuation and expansion of the Generalized System of Preferences (GSP), which expires this year and regulates trade between the EU and Latin American countries, was another request made by the Rio Group that was included in the final declaration.

The Sao Paulo meeting was attended by all of the foreign ministers of the Rio Group—which consists of Argentina, Bolivia, Brazil, Colombia, Chile, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Venezuela. Attending the meeting as observers were the ministers of Trinidad and Tobago and Guatemala, representing the Caribbean and Central America, respectively.

The EU was represented by the foreign ministers of Spain and Portugal; Greek Alternate Foreign Minister Theodoros Pangalos, who is vice president of the EU; deputy ministers; and deputy ministers of the other members of the "Group of 12" (Denmark, Germany, Italy, United Kingdom, Ireland, Belgium, Luxembourg, the Netherlands, and France).

Beijing Trains Pakistani Nuclear Power Plant Operators

*OW2004120394 Beijing XINHUA in English
1117 GMT 20 Apr 94*

[Text] Beijing, April 20 (XINHUA)—A training course for 60 operators from Pakistan's Cashma Nuclear Power Plant opened today at the post-graduate school under the China National Nuclear Corporation (CNNC).

The 300,000 kilowatt Cashma is modeled after the Qinshan Nuclear Power Plant in coastal Zhejiang Province, which was designed and built entirely by China itself. It is the first nuclear power plant China has ever exported to a foreign country.

The contract obliged CNNC to provide training in basic theories to Pakistani engineers and technicians to ensure Cashma's safe operation and maintenance. The trainees are to receive on-job training at Qinshan at the end of the course.

According to CNNC officials, some 62 Chinese scientists were organized to prepare a set of 17 textbooks in 14 subjects for the training course, which were examined and approved by the China Institute of Atomic Energy, the National Nuclear Safety Administration and the prestigious Qinghua University.

The textbooks were accepted by the Pakistani side, the officials said.

Indian Article Analyzes U.S. F-16 Sale to Pakistan

*BK2904123794 Delhi THE PIONEER in English
15 Apr 94 p 8*

[Article by S.H. Venkatramani]

[Text] There has been considerable media celebration about the precise diplomatic strategy that India should adopt to prevent and pre-empt the United States from selling F-16s to Pakistan. The debate has begun to acquire a certain sense of urgency because of the impending visit of the Prime Minister, Mr. P.V. Narasimha Rao, to the U.S. What has accentuated the strategic importance of carrying conviction to Capitol Hill on the F-16s is the attempt by the U.S. Deputy Secretary of State, Mr. Strobe Talbott, during his just concluded visit to Delhi, to convince India about the strategic wisdom of the U.S. parting with 38 F-16s to Pakistan in return for the latter capping its nuclear programme.

Our sense of judgement is clouded at the moment by the political and emotional aftermath of the significant recent visits of Mr. Talbott and his immediate junior, the U.S. Assistant Secretary of State, Ms. Robin Raphel. On the one hand, Mr. Rao felt a compelling political need to talk tough with Mr. Talbott; on the other, Delhi could not help but betray its sense of lurking fear about the F-16s adversely altering the balance of power in the subcontinent. I would argue that it is a deep-rooted sense

of culture and conviction, independent of the immediate provocation, that we have to exhibit in responding to the question of the U.S. sale of F-16s to Pakistan. Instead of giving the impression that we are merely opposing the sale of the F-16s, we should broaden the base of the diplomatic debate to discuss the nuclear question per se.

We have consistently refused to sign the Nuclear Non-proliferation Treaty [NPT] on the ground that it was discriminatory. We have taken an issue-based position on the NPT. I think it similarly behooves us as a nation to take a principled stand on the broader nuclear question itself, instead of treating the F-16s as an immediate expediency.

What this means is that we have to take a position not only against the sale of F-16s to Pakistan; we have to fight against the unwitting dissemination of American nuclear weapons technology around the globe; more, we have to crusade against the spread of U.S. nuclear reactor technology itself to the rest of the world.

India should seize the F-16 opportunity to nail the American nuclear lie. Delhi can take up the cause of effectively proving that there is no such thing as a safe nuclear reactor technology. Every nuclear reactor produces, among several other radioactive by-products, 400 to 500 pounds of plutonium annually. You need just 10 to 20 pounds of plutonium to make a bomb. Therefore, the yearly radioactive waste discharged by an average nuclear reactor holds enough toxic potential for the manufacture of anything from 20 to 50 atomic bombs. Through plutonium, nuclear reactor technology and nuclear weapons technology have become inseparably interlinked.

The ecological hazardous potential of plutonium should not be underestimated at all. Named after Pluto, the Greek God of the underworld, plutonium is the most long-lived radioactive by-product of a nuclear reactor; it remains poisonous for at least 500,000 years. Just think for a moment that this stretch of time is more than 100 times longer than the entire span of recorded history. It is more than 50 times longer than the time that has elapsed from the end of the Ice Age to the present day.

Less than one millionth of a gram of plutonium can cause cancer. One pound of plutonium, if uniformly distributed throughout the earth, can afflict every human being with lung cancer. It is crucially important to realise that plutonium in the environment does not vanish with the death of an infected organism. A contaminated dead animal, for instance, may be eaten by another animal; it may also rot away, and mix with the soil. In any case, plutonium will remain in the environment, and will continue to poison one organism after another, one living being after another, for half a million years.

It has been authoritatively estimated that if the American nuclear industry expands according to current projections, and somehow manages to miraculously contain its plutonium with 99.99 percent perfection, it will be

responsible for 500,000 fatal lung cancers every year for 50 years after 2020 AD. This incidentally will amount to a 25 percent increase in the total death rate in the U.S. It is to be clearly understood that there is no putting the clock back on plutonium after it gets created as a byproduct; there is no unscrambling of the scrambled egg; there is absolutely no foolproof method of containing plutonium after it is made. As American nuclear technology seeps to the rest of the world, tonnes of plutonium are bound to get routinely transported across highways and through rail roads.

India should work for adequate universal appreciation of the fact that at every step in the process of generating nuclear energy there, is continuous and invisible radioactive poisoning of both the workers in the nuclear industry and the entire natural environment. From the mining, milling and enrichment of uranium to the fabrication of fuel rods, the operation of a nuclear reactor and the handling of nuclear waste, there is radioactive contamination of the human and physical environment at every stage. The radioactive substances that continuously escape into the atmosphere from the site of a nuclear reactor emit a range of subatomic particles that can penetrate your skin and damage your body cells. You also stand the risk of taking in radioactively polluted food or water that can do you incalculable internal harm.

All the advancements in American technology have not yet found a solution to the serious problem of decommissioning a nuclear reactor at the end of its useful life. The development and proliferation of the so-called faster breeder reactors only carries the nuclear risk a step further. These reactors use plutonium itself as a fuel and are much more dangerous than the ordinary commercial reactors. India can demonstrate its deep-rooted ecological sensitivity by driving the point home to the world at large that there is no such thing as a safe level of nuclear radiation, contrary to what the American nuclear industry would have us believe. It is relevant to note that Ralph Nader had made the point somewhere that nuclear power has become in many ways America's "technological Vietnam."

It would be a little sad if Mr. Narasimha Rao were to cosy up to Uncle Sam to stop the sale of F-16s to Pakistan. The Pressler amendment and the F-16 should be just flea-bites in the Indian-world-view. If India were to take up the cause of the development of technology for effectively harnessing solar energy, like, for instance, the development of commercially viable photovoltaic cells to covert sunlight into electricity, well, that would, mesh in with our native culture of concern for the environment. After recently espousing the cause of "the middle path" in the U.K., it will only be in the fitness of things if Mr. Rao were to give a call, for a transition from a poisonous nuclear era to a promising solar age, in the U.S. Mr. Rao should take the bull of the American nuclear industry by the horns rather than merely oppose the sale of F-16s.

U.S. To Transport CIS Diluted Uranium Via Finland *LD0505171794 Helsinki Suomen Yleisradio Network in Finnish 1430 GMT 5 May 94*

[Text] The United States can transport uranium from the nuclear arms plants of the former Soviet Union across Finland. The Council of State has granted a lower responsibility in the event of accidents with regard to the transportation of low-level uranium. The decision was made because of plans by an American company to import diluted uranium extracted from nuclear arms to the United States to be used as fuel in nuclear power plants.

The uranium is transported by cargo ships, which can now visit Finnish harbors to collect cargo.

Qian Qichen Says Beijing 'Does Not Know' DPRK Nuclear Plans

OW3004031394 Tokyo KYODO in English 0250 GMT 30 Apr 94

[Excerpt] Beijing, April 30 KYODO—Chinese Foreign Minister Qian Qichen indicated Friday [29 April] that China is not well-informed on North Korea's nuclear development program despite its friendly ties with Pyongyang, Japanese officials said.

Qian told a Japanese delegation led by House of Councilors President Bunbei Hara that China does not know for sure for what purpose North Korea is trying to develop nuclear facilities, the officials said. Qian said he cannot determine whether North Korea wants to use the facilities peacefully or develop nuclear weapons, or to use the nuclear issue as a means of improving relations with the United States, according to the Japanese officials.

North Korea has been accused of trying to develop a nuclear arsenal and of refusing to accept full inspection by the International Atomic Energy Agency (IAEA).

Qian also said that as the North Korean nuclear issue has had effects on Japan and South Korea particularly, China will try to find a solution through dialogue, the officials said. The foreign minister, noting Pyongyang's dissatisfaction with China's establishment of diplomatic relations with South Korea, said Beijing set up ties with Seoul so as not to isolate North Korea, the officials said. [passage omitted]

Bonn Providing DM20 Million for Disarmament in CIS

AU2604124894 Munich FOCUS in German 25 Apr 94 p 73

[Unattributed report: "CIS Disarmament: With Bonn's Money and High Technology"]

[Text] With German "know-how" and 20 million German marks [DM] (for 1993-94) for the time being, the FRG Government wants to accelerate the abolition of chemical and nuclear means of mass destruction in Russia and Ukraine. At the moment, the Russians can destroy only about 2,000 nuclear warheads per year. On

the territory of the former Soviet Union there are 30,000 nuclear warheads and, in Russia alone, 40,000 tonnes of chemical weapons. It would take 15 to 20 years to destroy these stocks.

An internal paper of the Foreign Ministry says that, in October 1993, an agreement was concluded with the Defense Ministry in Moscow on the construction of a pilot plant for the destruction of the chemical combat agents lewisite and yperite in the area of Saratov (final price DM62 million). A mobile laboratory for the analysis of combat agents was handed over to the Russians already in December 1993. The costs for the "disarmament aid for chemical weapons" in 1993: about DM5 million. For the accelerated disarmament of their nuclear weapons Russia and Ukraine have asked the Federal Government this year for equipment as well as control and safety systems at a value of about DM17 million.

ROK Signs Military Cooperation Memorandum With Russia

SK2904100794 Seoul YONHAP in English
0953 GMT 29 Apr 94

[Text] Seoul, April 29 (YONHAP)—South Korean Defense Minister Yi Pyong-tae signed a "memorandum of understanding on bilateral military exchanges between Korea and Russia '94-95," which puts emphasis on exchange of personnel, at a meeting Friday with his Russian counterpart Pavel Grachev in Moscow, the South Korean Defense Ministry said.

Yi and Grachev talked about major international issues in Northeast Asia, including Pyongyang's nuclear ambitions, the ministry said. The two ministers shared the view that the suspected North Korean nuclear problem should be checked to ensure peace in Northeast Asia and that the North must return to the nuclear Nonproliferation Treaty to assume its responsibility as a member of international community, the ministry said.

The two agreed to enhance bilateral military cooperation including exchanges of students and military personnel, the ministry said.

In accordance with the agreement, Mikhail Kolesnikov, Russian chief of General Staff, will visit South Korea during the second half of the year while South Korea's vice defense minister and the Air Force chief of Staff will visit Russia next year, according to the ministry. Russian Defense Minister Pavel Grachev will reciprocate with his Seoul visit next year, the ministry said.

The two sides agreed that South Korean military officers be assigned to Russian military education centers to help them learn the Russian language and enhance understanding between the two countries, the ministry said.

South Korean Naval Academy cadets will also be allowed to call at Russian ports while on their tour of foreign countries in their training ships, the ministry said.

The two also exchanged views on Russia's idea of repaying Korean loans in kind, particularly in weapons, the ministry said.

During his stay in Russia, Yi will meet with Russian Prime Minister Viktor Chernomyrdin, Foreign Minister Andrey Kozyrev and other high-ranking officials, the ministry said. Yi will also visit major Russian military facilities including tank units before leaving for Germany on May 3.

Russia, Norway To Cooperate in Burial of Radioactive Waste

LD2804170694 Moscow ITAR-TASS in English
1452 GMT 28 Apr 94

[By ITAR-TASS correspondent Aleksandr Shuvalov]

[Text] Moscow April 28 TASS—Russia and Norway have decided to cooperate in the building of a burial ground for radioactive wastes in Russia's far north and in organising a joint expedition to the sites where radioactive wastes have been submerged in the northern seas, ITAR-TASS was informed by the press service of the Russian Ministry of Ecology on Thursday.

Such decisions were the result of talks between Russian Minister of Ecology Viktor Danilov-Daninlyan and his Norwegian counterpart Thorbjorn Berntsen. Also present during the talks were representatives from Russia's Atomic and Transportation Ministries.

Norway also plans to help Russia modernize the "Pechenganikel" metallurgical plant and assess the radioactive situation around the "Mayak" nuclear enterprise.

Russian Scientists Assisting DPRK in Nuclear Program

SK2304015294 Seoul YONHAP in English
0137 GMT 23 Apr 94

[Text] Moscow, April 22 (YONHAP)—North Korea has persistently tried to attract competent Russian rocket engineers since 1990, with more than 20 Russian scientists having made their way to the Stalinist country via China to work in Pyongyang, a vernacular Russian newspaper reported Friday.

The KOMSOMOLSKAYA PRAVDA (Communist Youth's Truth) said it believed some scientists were assisting Pyongyang's nuclear development by computer mail from home since the Russian Government has barred them from traveling to North Korea, adding that controlling the scientists was impossible at present.

North Korea signed a contract with the defunct Soviet Union in August 1990 to import 200 rocket experts, but

it was nullified with Seoul and Moscow's normalization of diplomatic ties and Seoul's promise of a loan, it reported.

Anatoly Rubtsov, a Russian solid state physicist and now a member of North Korea's Science Academy, told the paper that Pyongyang approached him at a Beijing seminar in April 1991 after its original plan failed.

After accepting Pyongyang's offer, he bribed the Russian Foreign Ministry with U.S. dollars and obtained 200 blank passports. He was paid by the North Korean Embassy in Moscow.

Rubtsov said he was able to lure 36 Russian engineers, many of them experts in the rocket field. They told security officers they "wanted to use their knowledge anywhere regardless of politics" when they and their families were detained at Moscow's Sheremetievo Airport in October 1992 while trying to get to Pyongyang.

A reliable document shows that despite the government ban, more than 20 Russian scientists have made their way to North Korea via China, the paper said. Living under pseudonyms, they are reportedly paid 3,000-4,000 dollars per month. But some, preferring not to take the

risk, instead provide information by computer mail from their homes in Russia, the paper said.

Japan To Grant \$16 Million to Ukraine for Nuclear Disarmament

*LD0405165794 Kiev UNIAN in Ukrainian
1510 GMT 4 May 94*

[Text] Kiev [no dateline as received]—Our country will have a share of \$16 million in the \$100 million aid package allocated by the Japanese Government for nuclear arms dismantling in Kazakhstan, Russia, Ukraine, and Belarus, the Japanese Embassy told UNIAN on 4 May. Japan is expecting Ukraine to submit specific projects for this amount.

According to Ukraine's Foreign Ministry, the two countries are working on a joint declaration on principles of relations and cooperation between Ukraine and Japan, a memorandum on mutual understanding between the two countries' Foreign Ministries, and an intergovernmental agreement on mutual encouragement and protection of investments. They are also working on the issue of Ukraine's succession to the laws and agreements that regulated the relations between Japan and the former USSR.

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